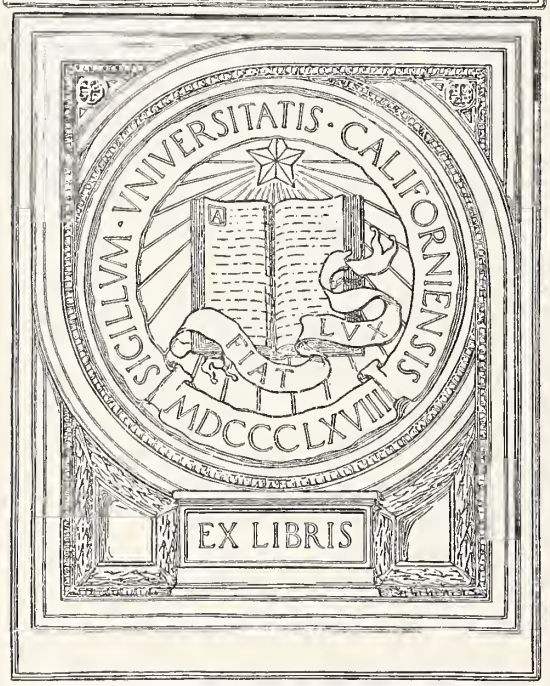
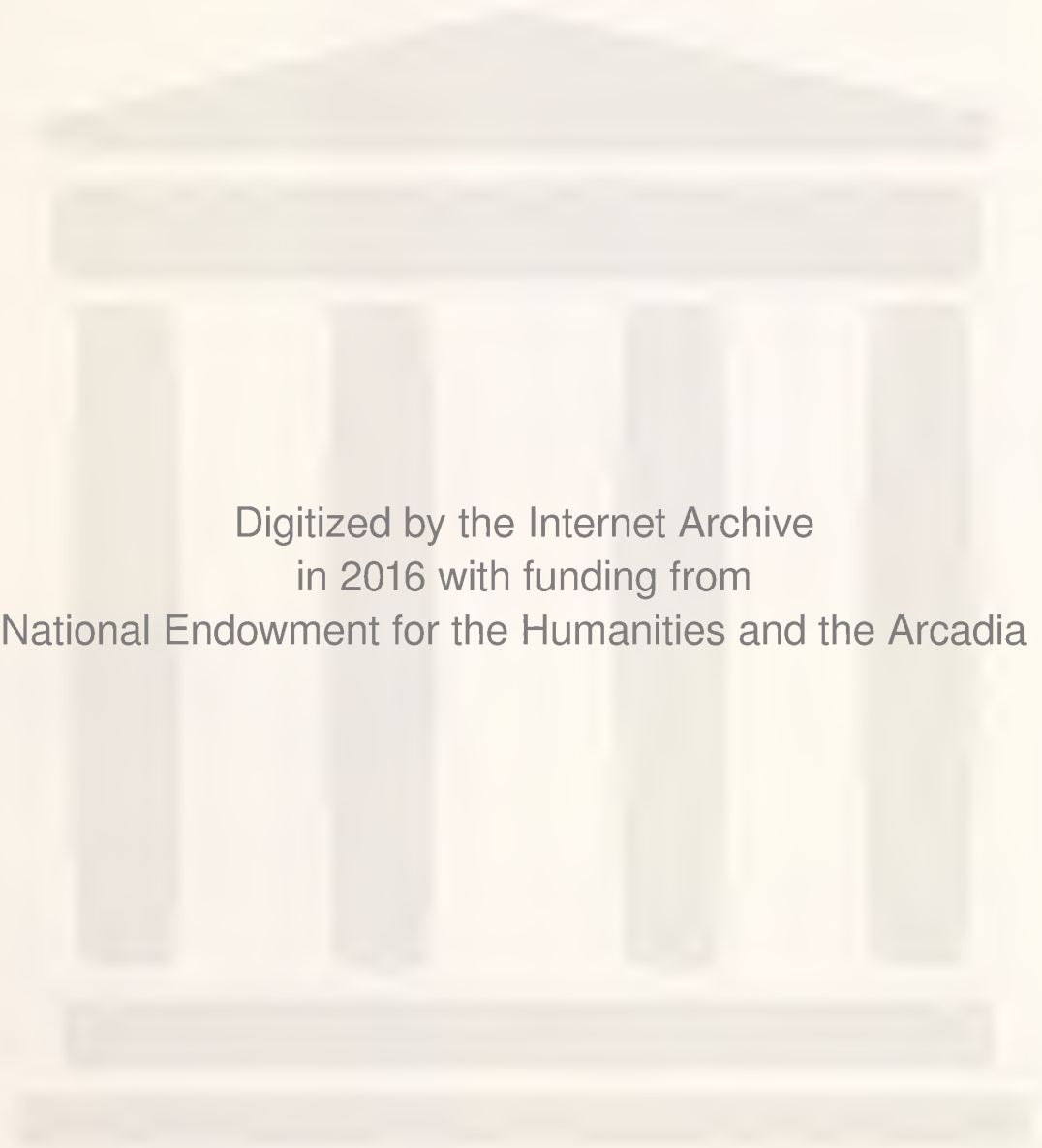
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The JOURNAL of The IOWA MEDICAL SOCIETY

IN THIS ISSUE

- Zoonoses and You: A Panel Discussion—Franklin H. Top, Sr., M.D., M.P.H., Moderator, William M. McCulloch, D.V.M., M.P.H., James H. Steele, D.V.M., M.P.H., and Sergio Rabinovich, M.D., Panelists
- A General Practitioner's Approach to Phobia and Childhood Phobia—Hassan A. Al Salih, M.D., Columbia, Missouri
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 489



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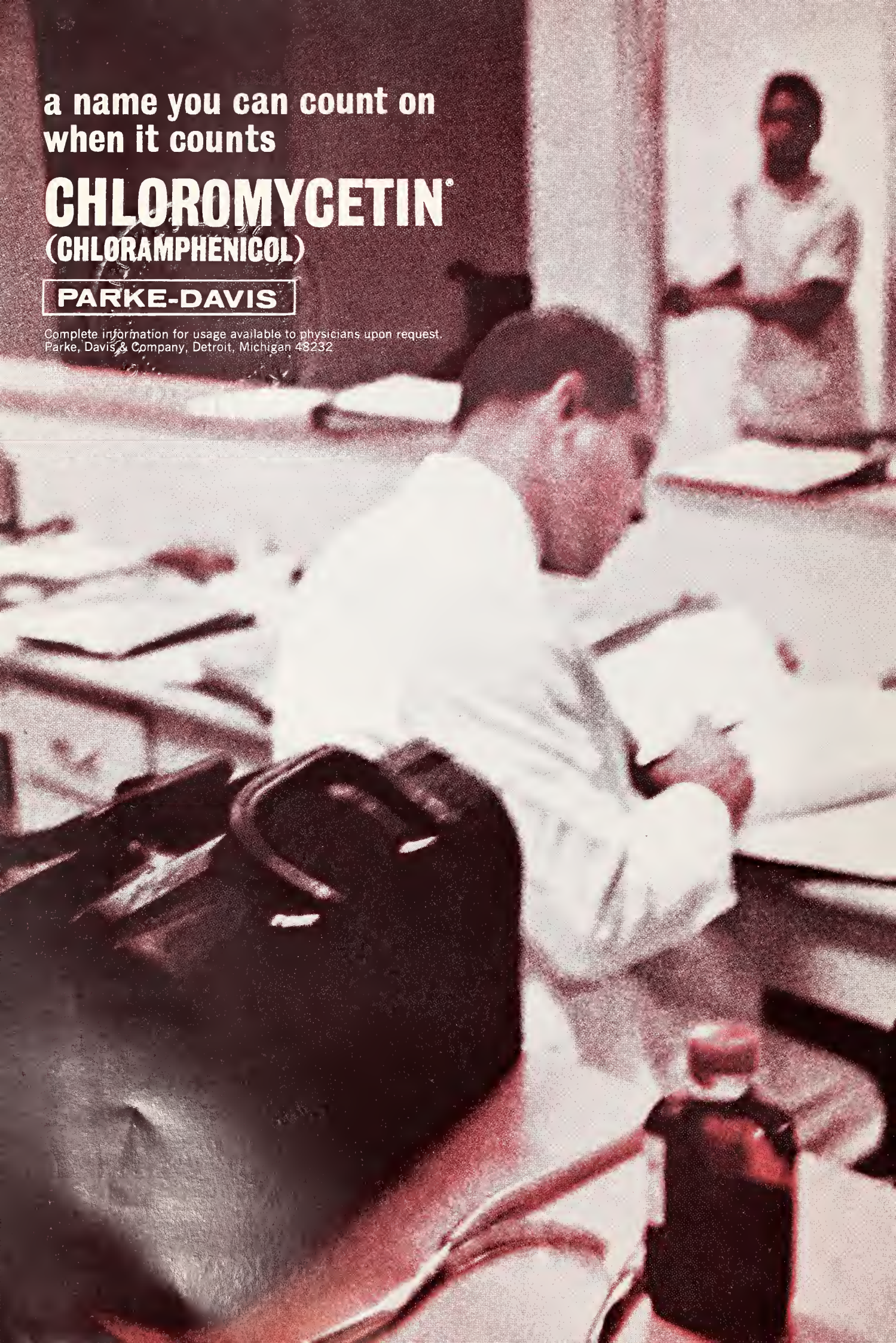
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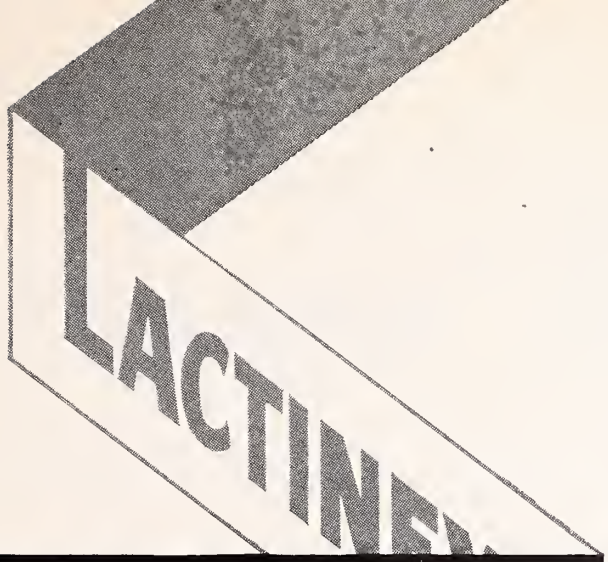
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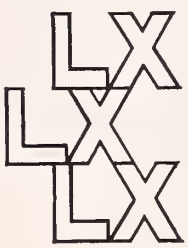
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The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVIII January, 1968 No. 1

CONTENTS

SCIENTIFIC ARTICLES

Zoonoses and You: A Panel Discussion
Franklin H. Top, Sr., M.D., M.P.H., Moderator, William F. McCulloch, D.V.M., M.P.H., James H. Steele, D.V.M., M.P.H., and Sergio Rabinovich, M.D., Panelists 21

A General Practitioner's Approach to Phobia and Childhood Phobia
Hassan A. Al Salih, M.D., Columbia, Missouri . 39

University of Iowa College of Medicine
Clinical Pathologic Conference No. 489 (Infant Convulsions, Hypoglycemia) 43

EDITORIALS

How's About Preparing That Report For Us? . . 55

Old Friends Revisited 55

Carcinoma of the Breast 56

Acceleration of Medical Education Carried to Extremes? 57

Suicide, Our Tenth Principal Cause of Death! . . 59

Children Learn What They Live 61

SPECIAL DEPARTMENTS

Coming Meetings 7

The Month in Washington 10

President's Page 54

In the Public Interest facing page 54

Drug Letter 63

The Doctor's Business 67

State Department of Health 72

Iowa Association of Medical Assistants 78

Woman's Auxiliary News 81

Personals 85

Deaths 98

MISCELLANEOUS

Obstetrics and Gynecology Department in Iowa City Shares in Testing Preventive for RH Disease 64

Cholera Is Again a Possibility 65

Child Passengers in Automobiles Should Wear Seat Belts, Too 65

The Mechanism of Heart Failure 66

Simplified Diet Manual Study Guide 66

Arteriosclerosis May Cause Both Gains and Losses in Auditory Acuity 68

Annual Refresher Course for GP's in Iowa City . 69

City of Washington's Experience With the Alcoholic 70

Vitamins B-3 and C Benefit Schizophrenics . . . 70

1967-1968 Issue of Booklet on Immunization for Foreign Travel 79

Effective Protection for Pedestrians and Cyclists . 79

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COMING MEETINGS

IN STATE

Jan. 16-17, 1968 **Postgraduate Course in Obstetrics**, University of Iowa College of Medicine.

Feb. 13-16 **Refresher Course for the General Practitioner**, University of Iowa College of Medicine.

CONTINENTAL U. S.

Jan. 10-12, 1968 **Current Concepts in Cardiology sponsored by Institute for Cardiovascular Diseases** at Good Samaritan Hospital, Del Webb's Towne House, Phoenix.

Jan. 11-12 **Rocky Mountain Academy of Industrial Medicine (3rd Annual Institute of Industrial Medicine)**, Aspen Meadows, Aspen, Colorado.

Jan. 11-13 **First International Conference on Prematurity sponsored by AMA Committee on Maternal and Child Care**, Pier 66, Ft. Lauderdale, Florida.

Jan. 14-18 **Second Annual Meeting of the Society for Cryo-Ophthalmology**, Statler-Hilton Plaza, Miami Beach.

Jan. 14-20 **University of Colorado 14th Annual General Practice Review**, University of Colorado Medical Center and Cosmopolitan Hotel, Denver.

Jan. 15-19 **Neurology and the Internist**, University of Miami School of Medicine, Eden Roc Hotel, Miami Beach.

Jan. 18-19 **Postgraduate Course on Kidney Diseases**, University of Nebraska, College of Medicine, Omaha.

Jan. 18-20 **AMA National Conference on Emergency Medical Services**, San Francisco Hilton Hotel, San Francisco.

Jan. 19-20 **New Concepts in Problems of Completed Stroke**, American Rehabilitation Foundation, Minneapolis.

Jan. 19-20 **American Society for Surgery of the Hand**, Palmer House, Chicago.

Jan. 19-20 **Colorado Regional Meeting**, American College of Physicians, Colorado Springs.

Jan. 20-25 **American Academy of Orthopaedic Surgeons**, Palmer House, Chicago.

Jan. 24-26 **Big Mountain Medical-Ski Conference sponsored by Northwestern Component of Montana Academy of General Practice**, Big Mountain Ski Resort, Whitefish.

Jan. 24-27 **American Group Psychotherapy Association**, LaSalle Hotel, Chicago.

Jan. 25-27 **Second Annual Midwinter Cancer Seminar sponsored by Colorado Division of American Cancer Society**, The Lodge, Vail, Colorado.

Jan. 25-28 **Chicago Medical Society**, Palmer House, Chicago.

Jan. 27-28 **Los Angeles Radiological Society (20th Annual Midwinter Conference)**, International Hotel, Los Angeles.

Jan. 29-31 **Society of Thoracic Surgeons**, Roosevelt Hotel, New Orleans.

Jan. 29-31 **32nd Annual Session of the International Assembly of Southwestern Texas**, San Antonio.

Feb. 2-3 **American College of Psychiatrists**, Fontainebleau Hotel, New Orleans.

Feb. 3 **American College of Physicians**, Nebraska Regional Meeting, Omaha.

Feb. 3-4 **American Academy of Allergy Postgraduate Course on Antigens, Antibodies, Inflammation and Autoimmunity**, Statler Hilton Hotel, Boston.

Feb. 5 **Closed Chest Cardiac Resuscitation**, University of Nebraska College of Medicine, Omaha.

Feb. 5-9 **Psychiatry and the Internist**, University of Southern California School of Medicine, Los Angeles.

Feb. 6-10 **American College of Radiology**, Drake Hotel, Chicago.

Feb. 7-9 **American Academy of Occupational Medicine**, Marriott Twin Bridges Motel, Washington, D. C.

Feb. 8-10 **Southwestern Medical Association**, Sheraton-El Paso Motor Inn, El Paso.

Feb. 8-10 **20th Annual Clinical Conference**, Wills Eye Hospital, Bellevue Stratford Hotel, Philadelphia.

Feb. 8-10 **Society of University Surgeons**, Americana Hotel, New York.

Feb. 8-13 **Congress on Medical Education**, Palmer House, Chicago.

Feb. 11-15 **Medical Society of the State of New York**, Americana Hotel, New York.

Feb. 11-16 **New Orleans Academy of Ophthalmology**, Roosevelt Hotel, New Orleans.

Feb. 12-16 **Postgraduate Course in Clinical Application of Cardiopulmonary Physiology sponsored by American College of Chest Physicians**, Ambassador Hotel, Los Angeles.

Feb. 14 **Symposium on Atherosclerosis and Its Relationship to Carbohydrate Metabolism**, Americana Hotel, New York.

Feb. 19-21 **1968 Sectional Meeting of American College of Surgeons**, Statler-Hilton Hotel, Dallas.

Feb. 19-23 **Intensive Care Units**, University of Cincinnati Medical Center and VA Hospital, Cincinnati.

Feb. 20-23 **Postgraduate Course in Surgery of the Hand**, University of Colorado School of Medicine, Denver.

Feb. 21-25 **Fifth Annual Postgraduate Diabetes Institute**, Aspen, Colorado.

Feb. 22-23 **Office Procedures for General Physician**, University of Nebraska College of Medicine, Omaha.

Feb. 22-24 **Central Surgical Association**, Sheraton-Cleveland, Cleveland.

Feb. 22-24 **American Academy of Forensic Sciences**, Drake Hotel, Chicago.

Feb. 23-25 **Semantics and Sexuality**, Three-day Forum and Workshop presented by San Francisco State College Faculty Program Center and the Pacific Medical Center, San Francisco Fairmont Hotel, San Francisco.

Feb. 25-28 **Chicago Medical Society Annual Clinical Conference**, Palmer House, Chicago.

Feb. 28-Mar. 3 **American College of Cardiology**, San Francisco Hilton, San Francisco.

ABROAD

Jan. 9-12 **International Symposium on Radioactive Isotopes in Clinical Medicine and Research**, Bad Gastein, Austria.

Jan. 14-21 **Latin-American Ortheopedic Society**, 7th Congress, Caracas, Venezuela.

Jan. 19-21 **International Seminar on Diseases of Colon, Rectum, and Anus**, Bombay, India.

Jan. 26-28 **International Congress of Physical Rehabilitation and International Colloquium on Sports Medicine**, Nice, France.

Feb. 7-10 **Medical Society of the United States and Mexico**, 12th Annual Meeting, Guadalajara, Mexico.

Feb. 28-Mar. 2 **Hypertensive Cardiovascular Diseases: Mechanism and Treatment**, University of Montreal (Clinical Research Institute of Montreal), Montreal.

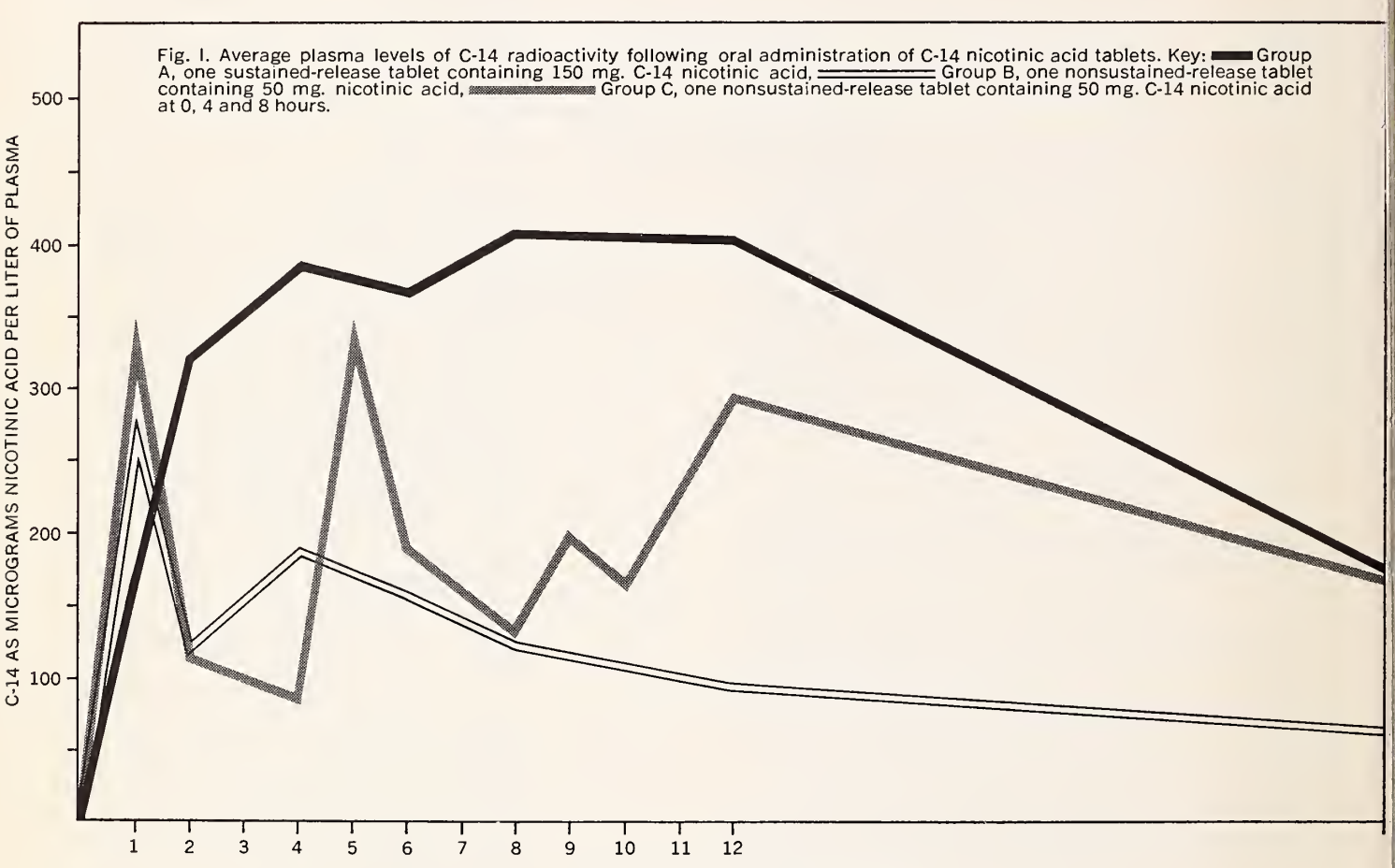
Mar. 25-27 **American College of Surgeons**, Sectional Meeting, Vancouver, B. C., Canada.

Apr. 21-27 **Inter-American Congress of Cardiology (8th)**, Lima, Peru.

Apr. 28-May 4 **Inter-American Congress of Atherosclerosis (3rd)**, Buenos Aires.

Sustained circulatory, respirator
and cerebral stimulation for th

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.





(fewer absent doses by absent-minded patients)

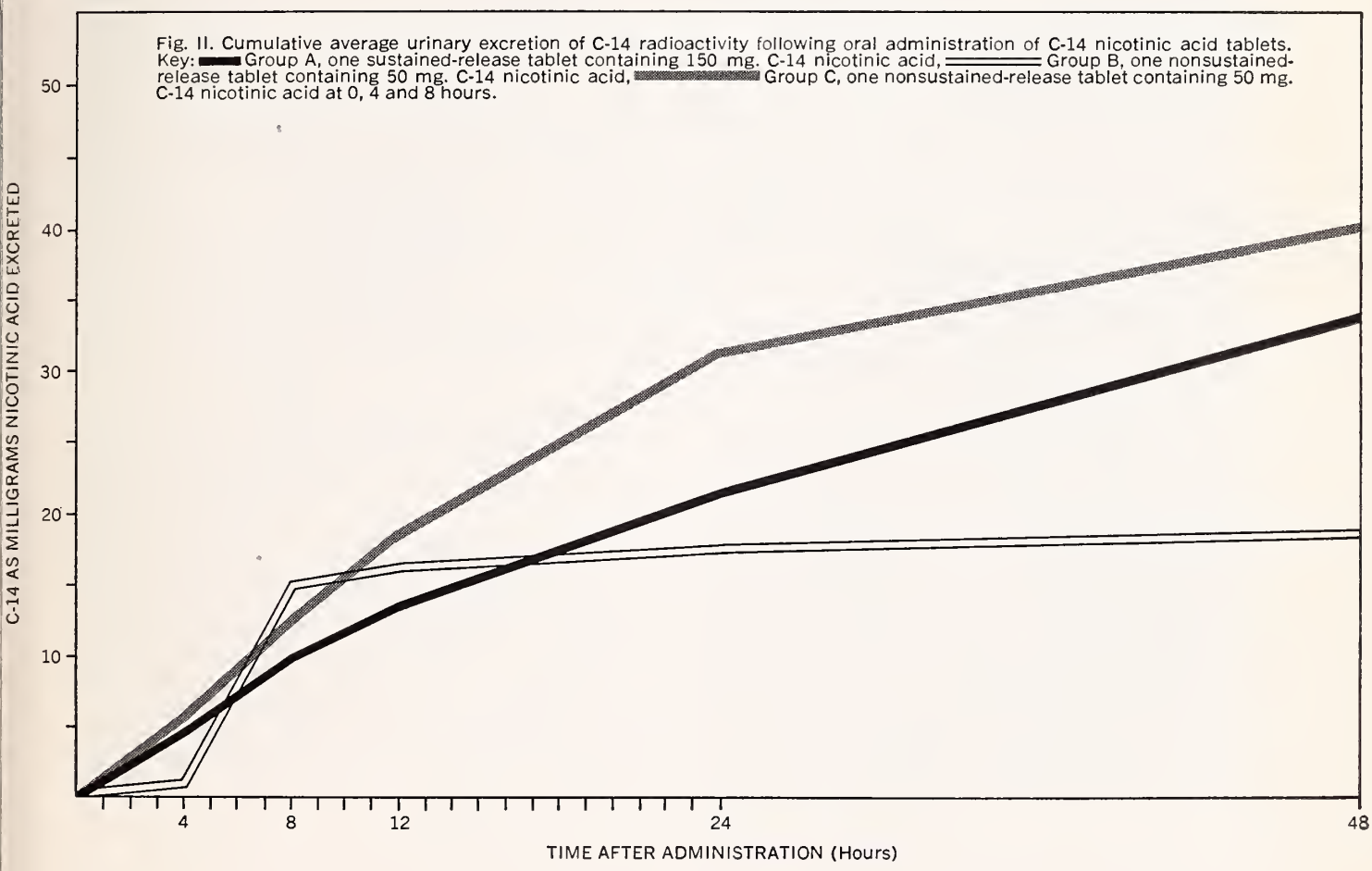
Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

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Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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The Month in Washington

Washington, D. C.—The National Advisory Commission on Health Manpower reported that the nation's health care system must be improved to make certain that quality health care is available to all Americans at a reasonable cost.

The 15-member Commission, in its report to President Johnson, urged a substantial expansion in the facilities and student bodies of existing medical schools, and continued development of new schools. At the same time the advisory group said, "Although the need for more physicians is urgent, the costs and dangers of a crash effort to increase production appear to outweigh the benefits."

The Commission, headed by J. Irwin Miller, chairman of the Cummins Engine Co., Columbus, Indiana, was set up in May, 1966, by President Johnson to recommend bold, imaginative ways to meet health manpower needs. Five physicians signed the report, including Dwight Wilbur, M.D., president-elect of the American Medical Association.

The Commission members agreed that tackling the problem of manpower, alone, would not cure present ills.

". . . If additional personnel are employed in the present manner and within the present patterns and systems of care, they will not avert, or even perhaps alleviate, the crisis," the Commission said.

"Unless we improve the system through which health care is provided, care will continue to become less satisfactory, even though there are massive increases in costs and in numbers of health personnel."

The Commission's recommendations were accompanied by an assertion that government alone is not big enough to solve the problems of health care for the American people.

The American Medical Association's House of Delegates at its recent meeting in Houston, Tex., approved a report of the Board of Trustees on the Commission's report. The Board stated: "The 'Report of the National Advisory Commission on Health Manpower' reflects much of the serious attention given to the evolving needs of health care long recognized, studied and implemented by the American Medical Association and other professional groups in the health fields. The House of Delegates and the Board of Trustees of the AMA have not had time to study the Report carefully. . . . However, it appears to recognize the needs arising from the rapid growth of the public's desire for health care. This attitude is the result of increasing awareness of the great advances in medical science and techniques, and of the prolongation of life for millions into middle and advanced ages. . . .

"The Report will receive the intensive study of the various expert groups within AMA, and reports on their recommendations will be issued as soon as they can be developed properly. There appear to be some areas in which modifications will be necessary to assure attaining the objectives sought for advancement of health care for all citizens."

The Commission's proposals included:

—Federal funds for capital improvements or operating costs of education should be provided to a medical school in such a way that they create economic incentives for the school to expand enrollment and at the same time to improve the quality of instruction.

—The federal government should make loans available to any medical student to cover the full costs of tuition and living expenses during formal professional education. The student should be able to choose between repaying the loan from earnings over a period of years, or giving two years of his time to approved national service apart from his Selective Service obligation.

(Dr. Wilbur dissented from his fellow committee members, saying, "I believe the principle is not sound, and that the recommendations are impractical, unnecessary, will not serve the purposes intended, and will be largely unacceptable to most students.")

—The federal government should give high priority to the support, under university direction, of experimental programs which train and utilize new categories of health professionals.

—At a minimum, foreign-trained physicians who will have responsibility for patient care should pass tests equivalent to those for graduates of U. S. medical schools.

—The Selective Service Act should be amended to provide for the automatic transfer of the records of every draft-eligible health professional, upon his graduation from professional school, from the local board of his original registration to the local board having jurisdiction over the area in which he works, and for a subsequent transfer with each change in the location of his work.

—The Selective Service Act should be amended to provide equal draft-liability for U. S. and foreign medical graduates.

—Service with the U. S. Public Health Service should be phased out as a substitute for the military obligation of health professionals.

—The Department of Defense should be in-

(Continued on page 12)



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The Month in Washington

(Continued from page 10)

structed to encourage the greater use of the Military Medicare Amendments of 1965, and should study the feasibility of utilizing voluntarily-obtained health professionals in military facilities located in the United States.

—Nursing should be made a more attractive profession by such measures as appropriate utilization of nursing skills, increased levels of professional responsibilities, improved salaries, more flexible hours for married women, and better retirement provisions.

—Programs for the health care of the disadvantaged should be given highest priority and made available wherever needed.

—Professional societies, universities, and state governments, with federal support, should undertake the development of model state-licensure codes for health personnel.

—Professional societies and state governments should explore the possibility of periodic relicensing of physicians and other health professionals.

—Professional societies, health insurance organizations, and government should extend the development and effective use of a variety of peer-review procedures in maintaining high quality health and medical care.

* * *

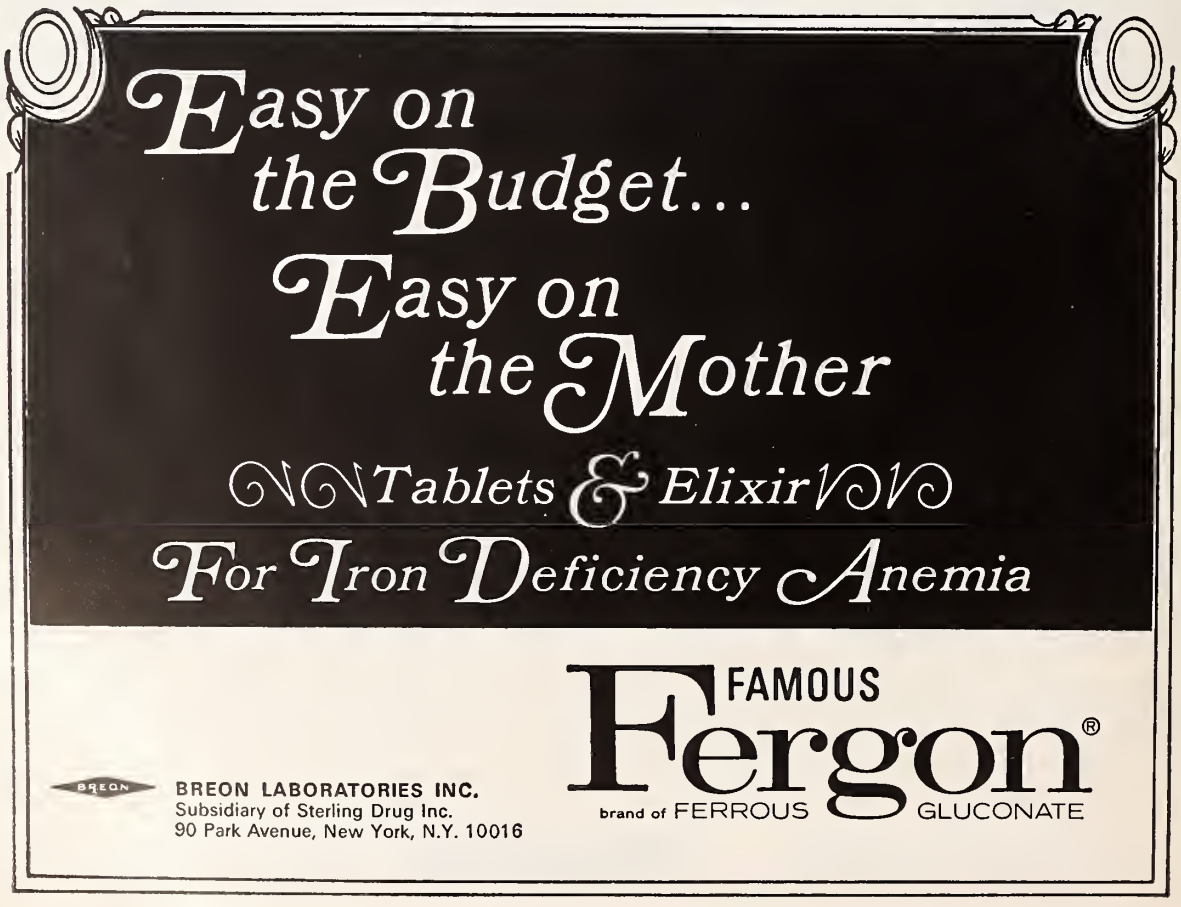
President Johnson, signing a $281 million mental retardation bill, declared that the nation still is not doing enough to solve the problem. He said that in dealing with the problem of mental retardation it is clearly the obligation of the nation to act. "We are not doing enough; we must do more; we are going to do more!" he said. The bill strengthens federal aid for the construction of new facilities for the mentally retarded.

He also signed a three-year, $589 million extension of federal aid for state public health programs. It provides for federal licensing of clinical laboratories operating in interstate commerce, unless they are run by pathologists, in which case the facilities must meet standards set by the American College of Pathologists or the American Hospital Association. Individual physicians operating laboratories for their own patients will not be affected by the new law.

From the November-December, 1967

Poison Control Centers' Bulletin

In 1962, the January-February issue of the BULLETIN was devoted to the subject of glue-sniffing. At that time the practice was first beginning to attract public and medical attention. Although glue was emblematic of the practice of solvent inhalation, other solvents like gasoline, fingernail-polish removers and spot removers were also implicated. There were several deaths associated with this practice due to the use of plastic bags. Most public authorities considered it a fad, yet



they took appropriate measures to curb the practice and warn the misusers of the dangers.

However glue-sniffing heralded a new era of experimentation with a wide variety of chemicals and concoctions. Since that time there has also been increased publicity—and probably increased use—of psychotomimetics. Compounds like marijuana and heroin have become so familiar that they are recognized by their nicknames "pot" and "H." It seems that lysergic acid diethylamide never had a formal introduction and joined the society as "LSD"; and the hallucinogen methyl dimethoxy methyl phenylethylamine is more commonly known as "STP." And new problems were generated for the medical authorities and poison-control centers. For although the phenothiazines have shown some effectiveness in treating LSD patients, their use in treating the symptoms produced by STP is said to be contraindicated.

The psychotomimetics of plant origin such as peyote, which are more frequently encountered in pharmacology texts and magazine articles on the religious rites of the Central American Indians, have not proved a problem for physicians in the poison-control centers. However they have heard of a more available substitute, morning-glory seeds, which in addition to being moderately hallucinogenic are capable of producing a psychosis similar to that sometimes brought on by LSD. In Maryland five youths sought medical attention after ingesting jimson weed, which is commonly accepted as a poisonous plant. It originated in, and its name came from, the colonial settlement in Jamestown, Virginia. It contains atropine and scopolamine, which can produce hallucinations.

Medicine such as barbiturates and amphetamines have been well covered in the medical literature. The treatment of amphetamine intoxication with phenothiazine derivatives is probably the most recent innovation. However other medicines have been added to the list. The antihistamines commonly used for antivertigo and antiemetic purposes have also been misused to produce hallucinations. One 17-year-old was admitted to a hospital 24 hours after chewing on the wick of a nasal inhaler containing a sympathomimetic amine. He was described as hallucinating, hyperactive and twitching. One poison-control center has received several calls regarding a powder of solanaceous herbs containing atropine and scopolamine that have been used for the purpose of "getting high." The powder is normally used by igniting it and inhaling the vapors for the relief of asthma.

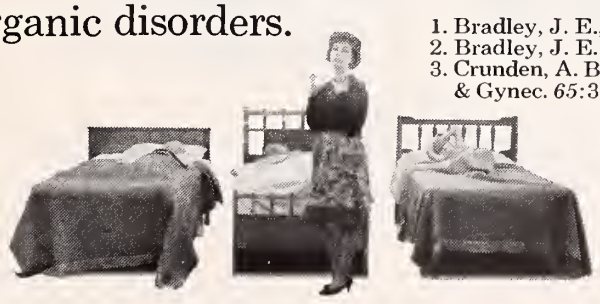
Even banana peels, after a more ritualistic than scientific preparation, have been smoked. Animal tests have confirmed that there are no psychotomimetic effects, and fortunately there have been no cases reported where it has caused harm. Not so with cocktail-glass chillers. Six deaths already have been reported from the freons in those preparations. The cause of death is not clear, but it may be freezing damage to the lung tissue, laryngeal spasm, or possibly anoxia because of the displacement of air. Thus the problems with the hallucinogenic drugs have been compounded by the use of non-hallucinogenic materials that may produce toxic if not lethal effects.



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1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



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Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

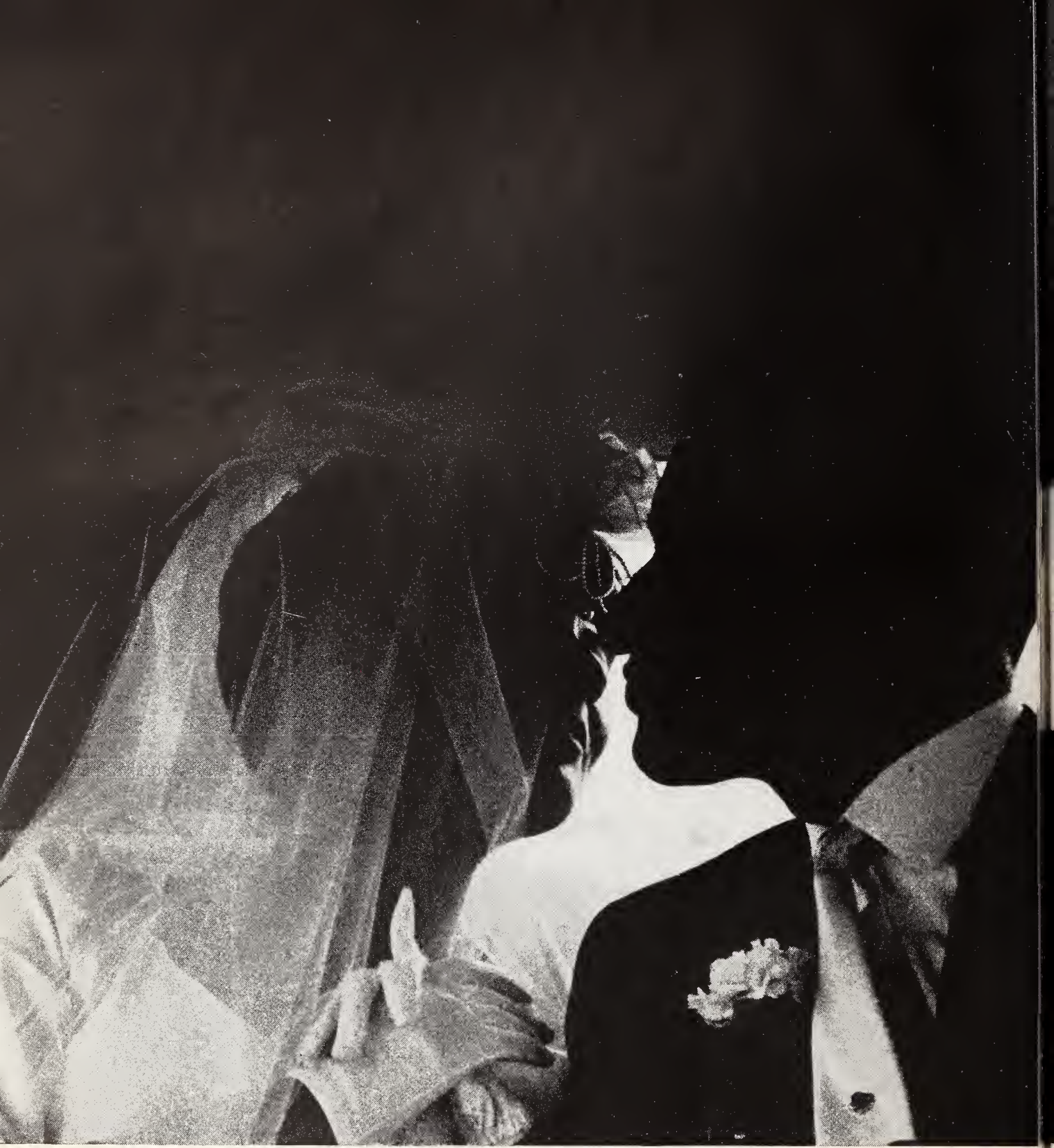
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Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
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Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, Tofrānil should not be used during the first trimester of pregnancy.
Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment with Tofrānil. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy.
Because of its anticholinergic effect, caution should be observed in prescribing Tofrānil for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hyperthyroid patients and in patients receiving thyroid medication when Tofrānil was added to the regimen.
Imipramine may block the pharmacologic activity of guanethidine and other related adrenergic neuron-blocking agents.
The drug is not recommended at the present time in patients under 12 ye of age.
Adverse Reactions: Dryness of the mouth, tachycardia, constipation, di turbances of accommodation, swea ing, dizziness, weight gain, urinary frequency or retention, nausea and vomiting, peripheral neuritis, mild parkinson-like syndrome, tremors, rare cases of falling in elderly patients, confusional states (with such symptoms as hallucinations and dis orientation), activation of psychosis schizophrenics and agitation (inclu

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l hypomanic and manic episodes) ich may require dosage reduction d/or addition of a tranquilizer or nporary discontinuation of the drug, ileptiform seizures, orthostatic potension and substantial blood essure fall in hypertensive patients, rpura, transient jaundice, bone marw depression including agranulocysis, sensitization and skin rash cluding photosensitization, eosinoilia, and mild withdrawal symptoms sudden discontinuation after proged treatment with high doses. ccasional hormonal effects (imtence, decreased libido, and estronic effects) may be observed. ropine-like effects may be more pnounced (e.g. paralytic ileus) in sceptible patients and in those ing anticholinergic agents (includ- antiparkinsonism drugs).
tpatient Adult Dosage: Initially, mg. daily, increased, if necessary, to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
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Materials Available From AMA

Is it ethical for a physician to list his specialty in the telephone directory? And to what extent? A six-page booket, "Guidelines for Telephone Directory Listings," readily answers such questions. This booklet is useful to the county medical society, the physician and the local telephone company in assisting the public while maintaining the dignity of the medical profession. The booklets, prepared by the Judicial Council, may be obtained from the AMA's Department of Medical Ethics (535 North Dearborn Street, Chicago 60610) at no charge.

* * *

Should a physician inform his county medical society of his appearance on a radio or TV program? How can a county society improve press relations through their physicians? "Guidelines for Physicians in Their Relations With the Communications Media" offers practical suggestions for physicians regarding speaking engagements, photographs, the MD-patient relationship, and radio and TV appearances. This seven-page booklet, published by the AMA's Judicial Council, is available without charge from the Department of Medical Ethics.

* * *

Free reprints of the series of papers presented at the Symposium on Skin Diseases Common to Man and Animals (published in ARCHIVES OF DERMATOLOGY: October, 1967) are now available. The 70-page reprint may be obtained by writing the Committee on Cutaneous Health and Cosmetics, AMA, 535 North Dearborn, Chicago, Illinois 60610. The one-day symposium, jointly presented in November, 1966, at Palm Springs, California, by the AMA and the American Animal Hospital Association, was directed toward physicians, doctors of veterinary medicine and biologists.

* * *

Updated lists of AMA approved or accredited schools, revised to September 15, 1967, are now available from the Department of Allied Medical Professions and Services, AMA, 535 North Dearborn, Chicago, Illinois. Included are AMA approved schools of cytotechnology, inhalation therapy, x-ray technology, physical therapy and medical technology, approved courses in occupational therapy and accredited schools for medical record librarians and medical record technicians.

* * *

The AMA has recently published the proceedings of the 8th National Conference on Medical Aspects of Sports. This meeting, held November 27, 1966 in Las Vegas, discussed such topics as fitness and the adult athlete, medical aspects of weight control, problems in winter sports and the medical society's committee on sports. Copies are available at $2.00 each from the AMA's Order Handling Department.

The JAMA "Medical News" Section

It has been estimated that the "average" practicing physician spends from six to eight hours every week reading scientific papers and medical journals. But the continuing advances in medical science have become so vast that even if a physician abandoned his practice and spent all his time reading medical literature, it would be impossible for him to cover it all. That's why the service performed by the AMA's Medical News Department fulfills such a vital role in medical communications today. Its product, appearing each week as the "Medical News" section of JAMA, is 14 pages of concise, up-to-the-minute, authoritative news of research and medical meetings.

Because most practicing physicians do not have time to attend more than four or five medical meetings a year, the Medical News staff, comprised of seven science writers and editors, goes where most physicians can't. The staff travels throughout the United States, annually covering approximately 160 scientific meetings considered especially significant. Roughly, 85 per cent of these have a direct relationship to medicine. The remainder deal with physics, biochemistry and other closely related scientific disciplines.

Since an increasing amount of research is being done in laboratories and clinics financed by the federal government, and since more and more decisions being made in Washington have a direct and profound effect on research, one member of the staff is assigned to the Washington Office. He also covers the eastern seaboard.

Special care is taken to select significant material, and present it in a conservative manner. Its articles never draw conclusions. In determining what is to be covered and what is to be published, the staff works closely with the editor and senior editors of JAMA, with other physician members of the AMA staff and with more than 50 physician consultants, experts in their specialties, from around the nation.

Time being a critical factor in today's medical communications, staff members file their stories by teletype or telegraph direct from meeting sites. This permits prompt review and appropriate follow-up. The result is that stories can be published within three weeks—quite rapidly for a medical publication.

Unlike the lay press, which limits its news of medicine to topics which are most interesting to the public, the Medical News staff is concerned only with presenting topics which are most interesting to physicians. "The spectacular," points out John Connors, director of the Medical News Department, "is quite different from the significant. In our role we must talk to the physician in his language and provide him with the information he needs to make a proper judgement on scientific developments."

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Zoonoses and You: A Panel Discussion

FRANKLIN H. TOP, SR., M.D., M.P.H., moderator, and WILLIAM F. McCULLOCH, D.V.M., M.P.H., JAMES H. STEELE, D.V.M., M.P.H., and SERGIO RABINOVICH, M.D., panelists

Dr. Top: Zoonoses are animal diseases transmissible to man. Occasionally man transmits his diseases to animals, but in general the dividing line is clear cut. Zoonoses really have been important since antiquity, but all of them haven't been called by the names applied to them today. Those of you who read the BIBLE assiduously will find that there was a pestilence in biblical times due to mice. It probably was bubonic plague. Certainly anthrax affected camels, sheep, oxen and horses, and it, too, is mentioned in the BIBLE. Rabies was known to Aristotle and to Plutarch. In the Sixth Century a disease referred to as a "scourge" very likely was scrub typhus, and one in the Eleventh Century probably was louse-borne typhus fever.

In the golden era of bacteriology that extended roughly from 1875 to 1920, diseases of man far overshadowed those that primarily affected animals. Then, as human diseases were brought under control by various methods (improvements in sanitation and the use of immunization procedures, either active or passive, etc.), the zoonotic diseases began to assume greater importance. Actually there was a change in type and epidemic character of many infectious diseases beginning around 1900. Thereafter, epidemics continued to occur, but except for influenza, they declined very considerably. Discovery of the causative agents for many of them put man in a position to control them, to the extent of utilizing sera for treatment, and later vaccines for active prevention.

Subsequently, antibiotics became useful in prevention and treatment.

In 1910, a personal-health movement was born, and in 1920, the community-health movement. Active immunization gained impetus after the 1920's. When control of human diseases had been made more effective, zoonotic infections came to the fore, the most important of which were anthrax, brucellosis, leptospirosis, the arthropod-borne encephalitides, rabies and salmonellosis. These diseases have led to the increased importance of comparative medicine, and have led veterinarians and doctors of medicine to collaborate on diseases which affect both man and animals.

Without further ado, I shall call on members of the panel. Dr. Steele will talk on zoonotic diseases, emphasizing their international importance.

This presentation took place at the 1967 annual meeting of the Iowa Medical Society. Dr. Top is head of the Dept. of preventive medicine and environmental health and director of the Institute of Agricultural Medicine and chief, Veterinary Public Health Section, College of Medicine, U. of I.; Dr. McCulloch is an associate professor in Dr. Top's department; Dr. Steele is chief of the USPHS Communicable Disease Center, at Atlanta; and Dr. Rabinovich is an assistant professor of internal medicine in the College of Medicine at the U. of I.

Dr. Steele: You all have received copies of the chart entitled "Epidemiological Aspects of Some of the Zoonoses." It is a compilation prepared by our office in an attempt to keep us up-to-date regarding the occurrence of zoonoses throughout the world.

I propose to run through the chart (reproduced at the end of this transcript), touching very rapidly on its highlights, emphasizing the size of the problem, and saying a word as to the status of various diseases in the United States. The other speakers will go into more detail.

I shall lead off with *anthrax.* As Dr. Top pointed out, it is probably one of the oldest of zoonoses. There is no doubt that it existed in the Valley of the Nile during Biblical times, and there is evidence that it is worldwide. In the United States it has now almost disappeared. Six human cases were reported in this country two years ago, but on a worldwide basis we talk about 10,000 cases or more each year. One reason for its virtual eradication in the United States has been the development and use of effective animal vaccines. They are being used for man in industries where workmen are constantly or occasionally exposed in handling hides, hair, wool, etc. One of the things that has changed veterinary medicine to a considerable degree has been the responsiveness of animals with anthrax to massive doses of penicillin. Thus we no longer have to think in terms of destroying animals, for today they can be treated if they have not reached the advanced or terminal stages of the disease.

The second heading in the chart, *bacterial food poisonings,* will be considered later. We can still say that food poisoning is one of the major public-health problems of the world. I should estimate that the total number of tourists or travelers throughout the world who are affected by these diseases runs into the millions. One cannot assign an exact figure. How does one treat such ailments? Well, give people whatever you recommend, and most of them will survive.

As regards *brucellosis,* the United States will see the virtual disappearance of that disease within the next decade. You, who are medical practitioners, certainly have seen a great deal of it, and I certainly have known it in animals. Of the veterinarians who are my contemporaries—who graduated almost 30 years ago—almost half either developed the disease or were sensitive to the organism during a period in the late 1930's. I was at Michigan State when the big outbreak occurred among the students there, affecting about 100 of them and causing two deaths.

A look at countries other than the United States reveals that our closest neighbor to the south, Mexico, has roughly 200,000 human cases per year, affecting about 0.5 per cent of the population. As one goes farther south, into South America, he finds that the same figure holds true for some of the other areas where large goat populations are present—goats being the principal reservoir of the disease.

It has been my experience that brucellosis continues to be a problem in southern and eastern Europe, and in Russia it still is a problem of enormous magnitude. The reservoir there seems to be mainly sheep. The sheep population of Russia is second only to that of Australia, for there are 150,000,000 sheep in Russia and 175,000,000 in Australia. In an attempt to control the human disease in Russia, people are vaccinated with a modified Strain 19—the sort used in cattle. I remember my shock when Russian veterinarians told me about it. I asked incredulously, "Do you *people* take it, too?" Many were extremely sensitive to the organism. One fellow showed me his arm where a cold abscess had developed, and it looked as if a branding iron had been used on him. The scar was the result of scratching the skin and scraping brucella-abortus Strain 19 organisms onto it. When you contract brucellosis in that part of the world, you really are given the treatment! If I were to try to estimate the worldwide extent of the brucellosis problem, I should say it runs into the millions of cases. How many millions, I wouldn't attempt to guess.

Coli bacillosis—Escherichia coli group. There is increasing evidence now that many of the animal types are crossing over and are causing illness in man. And this is a particular threat to people who do not have proper refrigeration and cannot properly handle food products of animal origin. Studies of low economic groups in Southern communities—Negroes especially

—indicate that some of the animal serotypes are being recognized in human beings today.

Erysipiloid infections have nearly disappeared.

Leptospirosis is a fascinating disease. There is a great deal of it in animals throughout the world, but is still is not a large human health problem.

Melioidosis, a pseudo-glanders of southeast Asia, is a disease of wartime.

Pasteurellosis is interesting, in a sense. It is becoming a new complication of bite wounds. and whenever a patient presents with a bite wound, it is a possibility that must be considered. If present, one must use the correct antibiotic for it.

Plague is a disease that is on the decline throughout the world, though in Vietnam, at the moment, it is of some concern.

The pneumonias are very interesting inasmuch as we find human pneumonias in calves. The finding has been reported mainly from Scandinavia, but the disease is also encountered in the northern part of the United States.

Pseudotuberculosis is worldwide, and what makes that infection interesting is that it simulates plague.

Rat-bite fever has practically disappeared in the United States and in the world. Little is heard concerning it.

One entity that I do want to emphasize, for it is the largest of all, is *salmonellosis.* My emphasis fits in very well with the remarks that Dr. Mark Lepper made as I was entering this room, about the transfer of resistance between Escherichia, Salmonella and Shigella. I'll go him one better. I am starting to suspect that many of our Salmonella are being made up from genetic material sloughed off by human coli. This, in combination with the enormous non-medical use of antibiotics in animal feeds, is creating optimal conditions for a new evolution of bacterial organisms of the gut. Where that may lead us, I am not sure.

One of the questions I am supposed to answer is how to set up controls for studies of salmonellosis. I was checking with some of my colleagues in the World Health Organization who had conducted a study in Outer Mongolia. I said, "That looks like a place that we can use for a control study, since Outer Mongolia has 25,000,000 animals and only 1,000,000 people." I assumed there was no antibiotic industry there, but I was told that there are plans for developing one, and that the people of Outer Mongolia will be feeding antibiotics to their animals by 1970!

The Salmonella problem deserves attention by itself. I dare predict that if all of the infecting organisms could be identified, we would report somewhere near 1,000,000 cases annually in the United States.

The *Staphylococcal* and *Streptococcal* diseases of animals are so closely comparable to those found in man that most of the time I am inclined to think they originate in man, and I won't accept responsibility for saying they originate in animals.

Tetanus is an ancient disease of animals, and in that connection one has to think of their excretions. Don't forget that dog and cat feces carry tetanus organisms, and that the excreta of all other animals may do so. It is an important disease. Inoculation with tetanus toxoid is still the best way of controlling tetanus.

We are fortunate that *bovine tuberculosis* has just about disappeared from this country. In Poland, on the other hand, 75 per cent of the cattle are infected. The same was true in southern Germany after the War, and Dr. Top can verify that statement, for he investigated the situation there when one-third of all the human tuberculosis in Germany was of bovine origin. As we look at the developing areas of the world, we find that the same conditions are repeating themselves that occurred in North America and Western Europe 40 or 50 years ago. One point I should like to make is that BCG is of no value in the control of animal tuberculosis. On the other hand, INH is effective, but it is very expensive, and the only place where one can think of using it is in purebred herds where it is essential to protect certain genetic lines.

Tularemia is still a disease that threatens hunters and outdoor enthusiasts.

Vibriosis is a newly recognized disease, and whether it is a true zoonosis or whether the organism is ubiquitous in nature and affects man and animals similarly, I don't know.

The fungal diseases are found mostly in man. Concerning them, I'll say only that they are

common to man and animals. Except for ringworm, I hardly think animals are the true reservoirs. I think that man and animals are both infected from the environment, where organisms can multiply and grow.

Looking on down the list to *the parasitic diseases,* one notes that the world is filled with them. They are myriad, and time prevents my going into any detail regarding them. I might say, however, that if you have patients who intend traveling to the Orient, to Africa, etc., you should be aware of these diseases and should advise them to take certain precautions.

The condition that bothers us most in the United States is *trichinosis,* and I'll say just a word about it. I'm waging almost a personal campaign regarding it in an attempt to vindicate public-health methods in protecting our people. Every time I go behind the Iron Curtain and meet anyone who wants to take pot shots at me, I am asked, "Why do you Americans allow so much trichinosis to occur?" I tell them the question reflects data that are 40 years old. We are now doing a new survey of the United States in which we are collecting material from 10,000 human autopsies distributed over the 50 states, so that we may have a balanced statistical sample. The data at this moment, based on about 2,000 or more of those autopsies, show that about 5 per cent of our population have evidence of past infection by trichina. Practically all of that 5 per cent were people who died at ages beyond 40 years. So I think we are starting to win our battle with the trichinosis organism, but we still have a long way to go in eliminating the garbage-feeding of hogs. Then we have another reservoir—our wild carnivorous animals. How we can even think of controlling the disease in them, I have no idea! We don't use much dog meat in this country, but it is an additional source of infection. If you want a good index for the amount of trichinosis in any given community, examine 100 or more dog diaphragms at the dog pound. That will give you a clue as to the local status of the disease.

Down at the bottom of the list are *the rickettsial diseases.* They are all very interesting to us in this country because of the threat of their being imported from abroad. There is one that is of unusual interest. It is *Q-fever,* which I dare say has now been reported from every state in the Union. It is an extremely mild disease, and it is maintaining itself by infecting animals. It is losing its virulence, year after year. Last December I was in Geneva, serving as chairman of the WHO Panel on Zoonoses, and some of my colleagues from Italy and Yugoslavia told me of experiments in which they had inoculated the organism back through ticks, and that its virulence had increased during the course of two or three tick generations. So there we have a new cycle of biological interest. Organisms actually can lose their virulence and protect the population, but then can adopt new hosts and become very serious problems.

The viral diseases terminate the list. In the arthropod-borne group, some 250 different viruses are known, of which about 75 cause disease in man. In this country the old Eastern and Western encephalitides were large problems. We now have a number of others to add to them (e.g., the St. Louis and California encephalitides).

Yellow fever is of interest because when the eradication of yellow fever was first talked of, some 40 years ago in the Americas, no one realized that a reservoir would be found in the marsupials and subhuman primates of South America. Now we recognize it as a disease of the jungle, and we have little hope that it ever can be eradicated.

Lastly I want to say a word about *rabies,* one of the old diseases of the world. It is one that we are rapidly bringing under control. Only one human death occurred last year in the United States, from rabies, and I look forward each year to the possibility of saying that we haven't had a human death. The situation is changing drastically in this country. The dog is no longer the important vector. We can vaccinate the dog so that it is protected for life. The problem today is skunks, foxes, raccoons and bats. We are reaching the point where prophylaxis for campers, hunters, Boy Scouts and others may be necessary. Veterinarians and veterinary medical students are being vaccinated against rabies. Additionally, conservation personnel and laboratory workers are being inoculated. The human vaccines have come a long way, and there will be enormous im-

provements in purified antigens within the next couple of years. Immune (gamma) globulin (human) will be available either late in 1968 or in 1969, and it certainly will add to your armamentarium for treating patients who have been bitten by suspect animals which subsequently have eluded capture.

In summary, I'd like to say that the animals of the world are increasing at a much faster rate than the human population. This trend is largely the result of a demand by the "have-nots" to have a little bit more. There are approximately three billion large food animals—i.e., one billion each of cattle, swine and sheep. For man to have the red meat and by-products of those animals, the animal population will have to increase at the same rate as the human population.

Our domesticated bird population, consisting of chickens, turkeys, ducks and geese, is increasing faster than any other population in the world. Today the numbers are approaching four billion. It is predicted that by 1980 they will exceed eight billion, and thereafter they will practically double in each succeeding decade. Handling just the waste from the poultry industry constitutes a monumental problem. In Georgia, where I live, we slaughter a million chickens per day. Through a necessary cycle, the waste has to get back into succeeding generations, and it is creating an enormous problem of environmental contamination. Thus, because man and animals live side-by-side, it is increasingly important for us to have close cooperation between our respective branches of medicine!

Dr. Top: Thank you, Dr. Steele. Your list is an extremely valuable one, and I am sure each of us will want to retain it for reference.

Dr. McCulloch will discuss the single disease leptospirosis.

Dr. McCulloch: I am sure many of you have received letters over the past 10 years from Dr. Top and me, working in cooperation with the State Hygienic Laboratory and with Dr. Stanley Hendricks, of the State Health Department, concerning our leptospirosis studies. In European countries leptospirosis has been widespread in the animal population. It is found in the United States, and the more we look for it, the more frequently we find it. The numbers of human cases, though increasing somewhat each year, certainly are not comparable with the reservoir in animal species. By history-taking we can divide the occasion for infection of human beings into the "recreational" or the "occupational." As for the latter, nearly three-fourths are seen either in farmers or in packing-house workers—specifically those in the animal-husbandry industry. Many of you know that most animals are capable of shedding the organism in their urine for lengths of time varying from several weeks to several months. Rats, indeed, are known to shed it throughout their lifetimes. Thus the environment—a swimming hole, for example—can be a source of indirect infection, in addition to direct contamination incident to the handling of animal tissues.

Leptospirosis is a major disease in cattle and swine that causes abortion in those species. Several years ago an article in the MEDICAL JOURNAL OF AUSTRALIA told of a farmer who had been present at the delivery of a litter of pigs. Some were stillborn, and some weak. He had heard of mouth-to-mouth resuscitation in human beings, and he thought he would try it in his respiratorily-embarrassed piglets. The title of the article was a startling one: "Leptospirosis in Man Contracted by Mouth-to-Mouth Resuscitation." It is the reprint that probably is most widely read by the students whom we teach in Iowa City.

Leptospirosis in man, like many another zoonosis, can be confused with several other ailments. The organism is a very clever one. The primary types present in Iowa are not those producing Weil's syndrome—the icterohemorrhagic type with jaundice—but of the anicteric (no jaundice) type. The disease has been rather mild. Few if any deaths have resulted. When cases occur in the summer and fall, as most of them do, they resemble influenza or any of a number of other ailments. The symptoms are fever, headache, vomiting and muscle soreness. Very often a patient will say he was sick twice, meaning that he had a biphasic temperature curve. He exhibits flu-like symptoms that last for a day or two; he is well for one or two days; and then a very severe headache or the aseptic meningitis syndrome may occur. Therefore questions such as

"Where do you work?" "Where do you play?" and "What is your address?" are likely to elicit clues which will help in ruling leptospirosis in or out during the history taking.

Some of the recent studies we have conducted of animal hosts in Iowa have shown the major infecting serotype to be Leptospira pomona. Tests can be made at the State Hygienic Laboratory, including those for L. icterohemorrhagiae and L. canicola. Our studies indicate that animals harbor serotypes other than L. canicola and L. icterohemorrhagiae. They are as follows: L. ballum, which is very common in mice, and we have also found it in the opossum, and L. pomona, which has been isolated from cattle, swine and man. It was isolated from man in a human leptospirosis outbreak in Cedar Rapids in 1959, and was studied by Drs. Tjalma, Top and others in Iowa City and by the State Department of Health and the National Communicable Disease Center. An agent called L. hardjo has been isolated in cattle. We have also found L. grippotyphosa in cattle, raccoons, a Western harvest mouse, and more recently a fox squirrel. We have also identified a leptospire still to be named from the kidneys of frogs obtained in an area near Cedar Rapids where human outbreaks occurred in 1959 and 1964.

The various agents are shed in urine, so that wherever cattle cool their heels in the summertime—in streams and farm ponds—they may leave considerable amounts of urine. Thus, when city people go to the countryside to enjoy the fresh air and the presumably pure water, they as well as farm people may contract this disease through contact with the contaminated water. Consequently whenever fever, severe headache and stiff neck crop up in your history-taking, be sure to send a blood specimen to the State Hygienic Laboratory. The Laboratory cooperates with us by furnishing the blood serum for febrile agglutination tests for 13 leptospiral serotypes.

There are some 26,000 farm ponds in Iowa. The USDA has increased the money available to farmers for the development of recreational areas that many city dwellers may use for picnics or vacation sites. Many farmers cannot afford to give up animal husbandry and rely solely for income on such strictly seasonal enterprises, however. Thus, in hunting and fishing, many city as well as rural people come in contact with leptospiral-infected water supplies.

In 1964 we studied the second leptospirosis outbreak in cooperation with physicians in the Cedar Rapids area. One of the doctors had suspected the index case, and had referred the 11-year-old patient to University Hospitals because of the severe kidney problem that he had developed. Through the U. of I. pediatricians and the physicians in the Cedar Rapids area, some 14 additional cases were followed. L. pomona was isolated from the water in one swimming area. The same creek was involved in both the 1959 and the 1964 outbreaks.

A recent fascinating find we came across in screening occurred while four physicians in the state were cooperating with us in the follow-up of cases in which the initial history was of a febrile type illness that was found to be leptospirosis. Two serologic types were suspected—L. grippotyphosa and L. australis. The infection had resulted from hunting fox squirrels. Incidentally, some 87 per cent of the squirrels shot in Iowa are fox squirrels. The first victim was a farmer. We went into the area where he had hunted, and we shot nine squirrels. In one, L. grippotyphosa was isolated from the kidneys. That was the first isolation from fox squirrels, for none had previously been reported in the world literature. The farmer had cleaned all of his squirrels, and evidently had contaminated his mouth and eyes in the process. This episode indicates about as conclusively as possible that squirrels are a source of L. grippotyphosa infections in man.

The second case was also in a farmer. I reiterate that a complete history is important. Dr. Stanley L. Diesch, who was a veterinarian confrere in our department for several years, found that when he interviewed the farmer the first time he couldn't get him to admit the squirrel hunting. During the second interview, however, the man admitted having shot eight squirrels before the season opened. In epidemiologic questioning, it is important to establish an intimate doctor-patient relationship.

The next two cases show that patients need not be farm residents. One was a 16-year-old

Iowa City high school boy who had been hunting squirrels; the other was a Dubuque high school student.

After that episode, a retrospective study uncovered four cases that constituted fairly heavy epidemiologic evidence associating squirrel hunting with leptospirosis. *Send specimens to the State Hygienic Laboratory whenever you suspect leptospirosis!*

I want to mention that whether or not antibodies for leptospirosis appear may depend upon the type of test used and upon the time of its performance. A test has been developed by Mrs. Galton, director of the laboratory in Dr. Steele's department in Atlanta, Georgia, and together with her we are screening these antigens and find we can demonstrate some of the antibodies a little earlier than we used to. Results are verified by means of a live-antigen test. Unfortunately, it does not pick up antibody until six to 12 days after the onset. At present a combination of tests is used, and if a sample of serum is submitted within a week and a negative report is returned to you, please send a specimen of convalescent serum, for it may be positive, indicating leptospirosis if the titre is sufficiently high.

Two years after the 1964 outbreak, near one of the swimming sites, we photographed a cow urinating into the stream, above which two men were fishing and collecting chubs, among other things. The man was standing at the the water.

Because of some of the warnings that we put into print in consequence of our leptospiral isolations, primarily from water, the CHICAGO DAILY NEWS, on May 5, 1966, published an editorial entitled "Beware of the Old Swimming Hole." It stated: "Since the days of James Whitcomb Riley, the notion has been widespread that the swimming hole was a national asset like Paul Revere and Yellowstone Park. Not only was the memory of a cool place on a hot summer day a treasure to carry through life; a boyhood close to an old swimming hole was thought essential to becoming President of the United States. An unfeeling report by medical authorities in, of all places, Iowa, now blasts that pristine myth. What should be found lurking in the warm placid waters of the farm pond but leptospira parasites, among other unpleasant germs. These are carried by animals, both wild and domestic, and are deposited to breed and thrive in the ponds. They are responsible for an ugly disease called leptospirosis. For this reason ponds accessible to cattle, swine, raccoons, oppossums, foxes and mice should be avoided, according to the health authorities. This takes in virtually all of the 26,000 farm ponds in Iowa, and 2,000,000 acres of them strewn about the rest of the United States. So good-bye old swimming hole, with your rope-swing plunge from an overhanging bough and your minimal upkeep, and hello to the cement-bottomed, stainless steel-sided, chlorinated, filtered, heated, store-bought pool! No more mud or minnows between the toes; no more knotted clothes on the hickory limb, and the last one in is a monkey's uncle. Instead of growing up to grab for the presidency, the Ivory-pure youngsters will doubtless all rise to become executive ribbon clerks and live in ticky-tacky houses all in a row. But by George they'll be sanitary, and that's more than can be said of their leptospira-consorting grandfathers—if that matters!"

Dr. Top: Thank you, Dr. McCulloch.

We'll now ask Dr. Rabinovich, whose field is infectious diseases and who is a faculty member in the University of Iowa Department of Internal Medicine, to discuss brucellosis.

Dr. Rabinovich: Brucellosis is a disease of livestock which can be spread to man. Following recognition of the first cases in the United States 50 years ago, it was realized that the disease was quite common. The decline in the incidence of human cases in recent years is the result of improved methods for control of the disease in animals.

Iowa traditionally has had a very high incidence of brucellosis. During 1965, for instance, there were slightly more than 200 cases in the United States, of which 80 were reported in Iowa. The incidence of brucellosis in the United States has been declining in recent years. The decreased incidence is quite impressive—especially the data for 1966, which show no decrease for the United States as a whole but a decrease of about one-half for Iowa, attributed largely to control of the disease in livestock.

Dr. I. H. Borts and his coworkers at the

U. of I. College of Medicine showed that occupation influenced people's chances of contracting brucellosis in Iowa. The majority of cases were in particular occupational groups, with meat packers, farmers and veterinarians heading the list, in that order. About two-thirds of the housewives' group were wives of farmers who had direct contact with dairy cows. Very few cases in Iowa have been the result of milk contamination, and that is probably true in most other states at the present time.

The clinical findings are generally those of any chronic infectious process, and are quite non-specific. Splenomegaly is an important physical finding, and its presence in a patient with an undiagnosed fever leads me to consider the diagnosis of brucellosis. Abdominal as well as chest x-rays can be of value in the study of a patient with an undiagnosed fever. An estimate of the size of the spleen can be made by abdominal x-ray, and it can be of great value.

The serologic findings in brucellosis are of great diagnostic value. In most patients whose blood cultures are positive for brucella organisms there are significantly elevated titres, but a few have titres in the more equivocal range between 1:40 and 1:160. In those patients the titre may be elevated because of a previous brucella infection or because of acute brucellosis. It has recently been demonstrated that low agglutination titres may be due to the presence of blocking antibodies in the patient's serum. They can be removed by centrifugation of the serum at 3,000 r.p.m. for 15 minutes, with a subsequent rise in serum titre. This procedure should be performed on all sera with titres in the equivocal range mentioned above.

Other valuable work has recently been done on the interpretation of brucellosis titres that are not sufficiently elevated to be diagnostic. That work involved the ultracentrifugation of sera containing brucella agglutinins. In sera from cases of acute brucellosis, the agglutination antibody was found to be principally of the 7S IG type, whereas in those patients whose titres had resulted from a prior infection, the antibody was mostly of the 12-17S (IGM) type. The validity of that finding is still being studied, but it may be of great diagnostic value. This procedure is too complex and the necessary equipment is too expensive for routine use by most clinical laboratories, but it can be performed at the State Bacteriological Laboratory, in Iowa City.

Dr. Steele referred to the instance in which a veterinarian inoculated himself with a needle containing brucella vaccine. He developed a severe local reaction at the inoculation site, as well as fever and other constitutional symptoms. His brucella titre was elevated *before* the accident, indicating previous experience with the organism. That experience demonstrates the severe allergic response which can develop in persons who have been in contact with brucella in the past and are inoculated with brucella 19 vaccine.

Finally, let me mention some help that we have recently received from brucella taxonomists in clarifying the brucellosis picture in Iowa. Now the taxonomists are being very helpful. Up to a few years ago we were told that from 28 to 40 per cent of brucella organisms in Iowa were B. melitensis. Since there are relatively few goats in Iowa, that finding was difficult to explain. At a recent congress in Moscow, however, the taxonomy of these strains was reviewed and reclassified as B. suis. In reality, therefore, there have been only two cases of B. melitensis infection in Iowa among cases reviewed by Dr. Borts. One of them was the result of a laboratory accident, and the other was an imported case.

Dr. Top: Thank you, Dr. Rabinovich.

There are many more diseases that we might talk about, but our time is limited. The World Health Organization expects to release one of its Technical Reports in the near future, and it will be written under the auspices of Dr. Steele.

I shall now pass questions submitted by the audience to members of the panel. The first question is, "How much bat rabies is there in Iowa?" and it is addressed to Dr. McCulloch.

Dr. McCulloch: The first bat rabies cases in Iowa were reported from Osceola and Greene Counties in 1960. Iowa was the twenty-eighth state to report bat rabies. Since then a total of 18 counties have had proved bat-rabies cases. I can't recite the list of counties, but I can say

with certainty that they include Johnson, Linn and Polk.

The bat is one of the rabies carriers that Dr. Steele mentioned. Whether it has attained prominence in that role because people have looked for the disease in bats, or whether the increase has been a real one, we certainly see evidence of it in the health statistics reported by state health departments and from the National Communicable Disease Center in Atlanta. In 1961 some 88 bat-rabies cases were reported, and in 1965 the number rose to 484. There may be a combination of apparent and real increases here, for there has been considerable interest in the topic. Since 1951 a total of five human deaths have been associated with bat rabies in the United States.

Dr. Top: Here is the next question: "Is there a reliable way of determining that a stream is free of leptospires?"

Dr. McCulloch: We were just awarded a two-year extension of our grant to continue our study of the survival of pathogenic leptospires in Iowa ponds and streams. There are a tremendous number of water saprophytes that look exactly like leptospires under the microscope, so Mrs. Galton, of the Communicable Disease Center, is about to forbid our sending her any more water saprophytes to check out. The laboratory technics are hard to perfect, they take much time, and we are finding them quite a problem. However we are trying to solve it.

Dr. Top: A questioner states that many Iowans are fishing farm ponds, and he wants to know whether they should be warned against doing so.

Dr. McCulloch: As of now—and what I shall say is just a practical rule-of-thumb—we have isolated a number of leptospires from wildlife species such as raccoon, oppossum, squirrel and mouse, but when we follow up human outbreaks related to water—and I think this has been true throughout the country—the predominant serotype in human cases of water origin has been L. pomona, which is found most commonly in cattle and swine. We studied the 1964 human outbreaks that occurred near Cedar Rapids, and in the immediate area we found L. grippotyphosa and L. ballum. However there was no serologic evidence of the latter species in human patients. In the beef herd immediately upstream, and in another herd a mile farther upstream, the highest titres obtained were against L. pomona.

Although we see a widespread endemic situation in nature, I should say now, with less than all of the facts, "Go ahead and fish there." But a veterinarian should first make a health check on the domestic animals that frequent that pond. Another precaution might be to fence the cattle and swine out, so as to prevent their actually standing in the pond. If the urine were not dropped directly into the water, the pollution of the pond might be reduced by perhaps 90 per cent as a result of soil filtration and the action of sunlight.

Dr. Top: In conclusion, I should like to point out that it is really important for practicing physicians in farm areas to become well acquainted with the veterinarians in their localities. In many instances a veterinarian can tip-off the physician to human health hazards. In past years I have talked occasionally to county medical societies that invite veterinarians to an annual joint session. The two groups can be helpful to one another. A man who is seeking help for himself from you or me may have sick animals. Foreknowledge about the animal illnesses in the locality can help us in diagnosing the farmer's condition. Therefore, you should foster contacts with veterinarians in your area.

From the list that Dr. Steele has given you, and from the presentations of the symposium speakers on particular diseases, you have found out that zoonoses are becoming greater threats to man than are some of the infectious diseases that affect only human beings.

The charts discussed in this article have been reproduced on the succeeding pages.

EPIDEMIOLOGICAL ASPECTS OF SOME OF THE ZOONOSES

Zoonoses are infections and infestations shared by lower vertebrate animals and man.

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		1. BACTERIAL DISEASES		
Anthrax	Bacillus onthracis	Cattle, sheep, goats and swine	World-wide	Occupational exposure. Ingestion of contaminated meat. Occasionally airborne or biting insects.
Bacterial Food Infections and Intoxications	Various bacteria and their toxins, including: Salmonellae* Staphylococci Clostridium perfringens Clostridium botulinum (Toxin Types A,B,C,D,E)	Cattle, swine, and fowl	World-wide	Ingestion
Brucellosis	Brucella abortus Brucella suis Brucella melitensis	Cattle, sheep, goats and swine	World-wide	Occupational exposure and by ingestion of contaminated milk products and other foods. Occasionally airborne.
Colibacillosis	Escherichia spp.*	Cattle, swine and domestic fowl	World-wide	Ingestion
Erysipeloid	Erysipelothrix rhusiopathiae	Swine, fowl and fish	World-wide	Occupational contact
Glanders	Actinobacillus mallei	Horses, mules, and asses	Asia, Africa and South America	Occupational contact
Leptospirosis	Leptospira serotypes	Rodents, dogs, swine, cattle, and a variety of wildlife	World-wide	Occupational contact, immersion exposure and contaminated food.
Listeriosis	Listeria monocytogenes	Sheep, cattle, chinchilla, swine, goats and fowl	World-wide	Unknown
Melioidosis	Pseudomonas pseudomallei	Rodents and rabbits	Asia, Australia, Guam and Philippine Islands	Exposure and ingestion
Pasteurellosis	Pasteurella multocida	Mammals and birds	World-wide	Exposure and ingestion
Plague	Pasteurella pestis	Rodents	World-wide	Infected fleas and airborne
Pneumonia	Diplococcus pneumonia	Calves (transmitted from man)	Europe and North America	Airborne
Pneumonococcal mastitis	Diplococcus pneumonia	Cattle	Northern and Central Europe	Contact
Pseudotuberculosis	Pasteurella pseudotuberculosis	Guinea pigs and other rodents, pigeons, turkeys and canaries	World-wide	Occupational exposure

*Arizona organisms cause similar infections.

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
1. BACTERIAL DISEASES (Continued)				
Rat Bite Fever	Spirillum minus Streptobacilus moniliformis	Rodents and wild animals	World-wide	Rodent bites
Relapsing fever, endemic	Borrelia spp.	Rodent and wild animals	World-wide	Infected ticks and body lice
Salmonellosis*	Salmonella serotypes	Cattle, swine and fowl	World-wide	Ingestion, airborne, and contact
Staphylococcic Disease**	Staphylococcus spp.	Cattle, swine and fowl	World-wide	Ingestion and contact
Streptococcicosis***	Streptococcus spp.	Cattle and fowl	World-wide	Ingestion and contact
Tetanus	Clostridium tetani	Principally herbivorous, but all animals may harbor the agent	World-wide	Wounds
Tuberculosis	Mycobacterium tuberculosis var. bovis var. hominis var. avium	 Cattle Monkeys Fowl	World-wide	Ingestion, inhalation, and occupational exposure
Tularemia	Francisella tularensis	Rabbits, sheep, and wild rodents	North Americo, Europe, and Asia	Occupational exposure, handling, ingestion, and bite of infected insects and ticks
Vibriosis	Vibrio fetus	Cattle and Sheep	Europe, North and South America	Unknown
2. FUNGUS DISEASES				
Actinomycosis	Actinomyces bovis	Cattle, swine, horses, and dogs	World-wide	Endogenous
Aspergillosis	Aspergillus spp.	Birds, fowl, and many mammals	World-wide	Contact with organisms in nature
Candidiasis (Moniliasis)	Candida spp.	Birds, fowl, calves, pigs, rodents, dogs, cats, foals and other mammals	World-wide	Endogenous
Coccidioidomycosis	Coccidioides immitis	Cattle, dogs, wild rodents, sheep, horses	Southwestern United States, areas of Mexico, Central and South America	Contact with organisms in nature
Cryptococcosis	Cryptococcus neoformans	Cattle, horses, cats, dogs, pigs, and other mammals	World-wide	Contact with organisms in nature
Dermatophilosis	Dermatophilus spp.	Cattle, horses, sheep and deer	World-wide	Not fully understood
Geotrichosis	Geotrichum spp.	Cattle	World-wide	Endogenous

* Arizona organisms cause similar infections.

** Some strains occur commonly in man and some are common to animals, while others appear in both man and animals.

*** Group A streptococci have been found in man only.
Group B streptococci: common cause of bovine mastitis; other strains cause infection in man; no evidence of interchange.
Group C streptococci: strains isolated from both human and animal infections.
Group D streptococci found only in animal infections.

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		2. FUNGUS DISEASES (Continued)		
Histoplasmosis	Histaplasma capsulatum	Dogs, cats, cattle, horses, and rodents	Probably world-wide	Contact with organisms in nature
Maduromycasis	Several species and genera of fungi	Horses and dogs	World-wide, chiefly tropical areas	Contact with organisms in nature
Mucormycosis	Mucor spp.	Cattle, pigs, dogs and other mammals	Probably world-wide	Contact with organisms in nature
Nocardiosis	Nocardia spp.	Cattle, dogs, and other mammals	World-wide	Contact with organisms in nature
North American Blastomycasis	Blastomyces dermatitidis	Dogs, horses and sea lion	North America	Probably contact with organisms in nature
Piedra	Piedraia hartai	Lower primates	South and Central America, Java, Asia, and Africa	Contact with orgonisms in nature
	Trichosporon cutaneum	Lower primates and horses	Rare, reported from England and Latin America	Contact with organisms in nature
Rhinosporidiosis	Rhinosporidium seeberi	Horses, cattle, and mules	Endemic in India, Ceylon, and areas of western hemisphere. Sporatic in rest of world	Unknown
Ringworm	Microsporum and Trichophyton spp.	All mammals and birds	World-wide	Direct contact and fomites
	M. nanum	Swine	World-wide	Direct contact
Sporotrichosis	Sporotrichium schenckii	Horses, mules, dogs, cats, rats, mice and swine	World-wide	Contact with organisms in nature
		3. PARASITIC DISEASES a. Protozoan Diseases		
Balantidiasis	Balantidium coli	Swine	World-wide	Ingestion
Endemic pneumocystis	Pneumocystis carinii	Rabbits, guinea pigs, rats, dogs, cats, mice, sheep, monkeys	Europe, United States	Unknown
Leishmaniasis Visceral	Leishmania donovani	Dogs, cats, and rodents	South America Africa, Europe	Bite of infected sand flies (Phlebotomus)
Cutaneous Oriental sore	Leishmania tropica	Dogs, cats, and gerbils	Asia Asia, Africa, and Europe	Bite of infected sand flies (Phlebotomus)
Espundia	Leishmania braziliensis	Dogs, cats, and spiny rat	Central and South America	
Simian malaria	Plasmodium knowlesi	Monkeys	Borneo	Anopheles spp.
	Plasmodium malariae	Chimpanzees	Africa	
	Plasmodium cynomolgi bastianelli	Macaques	Malaya	

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		3. PARASITIC DISEASES (Continued)		
		a. Protozoan Diseases (Continued)		
Toxoplasmosis	Toxoplosma gondi	Birds and mammols	World-wide	Probably contact and ingestion olthough exact route is not known
Tryponosomiasis				
Africon Sleeping Sickness	Trypanosoma gambiense Trypanosoma rhodesiense Trypanosomo brucei	Wild and domestic ruminants and swine	Africa	Bite of infected tsetse fly (Glossina spp.)
Chagas Disease	Trypanosoma cruzi	Dogs, cots, swine, foxes, bats, rodents, and monkeys	North, Central, and South America	Fecal materioi of triatomid bug
		b. Tremotode Diseases		
Clonorchiasis	Clonorchis sinensis	Dogs, cats, swine, and wile animals	Asio	Ingestion of raw or partially cooked infected fresh water fish
Fascioliasis	Fasciola hepatica	Cattle ond sheep	World-wide	Ingestion of contaminated greens
	Fasciola gigontico	Cattle and sheep	World-wide	
Fasciolopsiasis	Fasciolopsis buski	Swine and dogs	Asia	Ingestion of row aquatic plants
Parogonimiasis	Paragonimus westermani	Dogs, cots, ond wild animals	Asia and Africa	Ingestion of raw or partially cooked infected crayfish
Schistosomiasis	Schistosoma japonicum Schistosoma mansoni	Cottle, swine, dogs, and rodents Baboons and rodents	Asia Africa	Penetration of unbroken skin by cercariae in water
Swimmer's itch	Schistosoma spp.	Birds and rodents	World-wide	Penetrotion of unbroken skin by cercorioe in fresh and salt water
		c. Cestode Diseases		
Beef tapeworm	Taenia soginoto	Cattle	World-wide	Ingestion of meosly beef
Dog tapeworm	Dipylidium caninum	Dogs ond cats	World-wide	Ingestion of dogs or cat flea
Fish tapeworm	Diphyllobothrium latum	Dogs and fish eating animols	Warld-wide	Ingestion of row or partially cooked infected fish
Hydatidosis	Echinococcus granulosus	Dogs, sheep, cattle, swine, and rodents	World-wide	Ingestion of tapeworm eggs
	Echinococcus multilocularis	Foxes, microtine rodents, dogs	N. America, Russio, Europe	Ingestion of tapeworm eggs
Pork tapeworm ond cysticercosis	Taenia solium Cysticercus cellulosae	Swine	World-wide	Ingestion of measly pork and autoinfection
Dwarf tapeworm	Hymenolepis nana	Rodents	World-wide	Ingestion of rat tapeworm eggs in food, fleas, meolworms
Rat tapeworm	Hymenolepis diminuta	Rats	World-wide	Ingestion of rat topeworm eggs in food, fleas, mealworms

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		3. PARASITIC DISEASES (Continued) d. Nematode Diseases		
Ancylastamiasis (cutaneous larva migrans ar "creeping eruption")	Ancylostoma braziliense	Dogs and cats	World-wide	Contact with infective larvae which penetrate the skin
Angiostrongyliasis	Angiastrangyliasis cantonensis	Rats	Pacific	Raw prawns and prawn juice, latter used on vegetables; slugs that contaminate raw vegetables and are accidently ingested.
Anisakiasis	Anisakis spp.	Herring, ather marine fish	Europe	Ingestion of raw ar portiolly cooked herring
Dirofilariusis	Dirofilaria spp.	Dogs	World-wide	Bites of infected mosquitoes
Trapical easinophilia	Brugia spp.; Dirafilaria spp.	Lower primates, mammals	World-wide, Tropical	Bites of infected mosquitoes
Filariasis	Wuchereria malayi	Dogs, cats, rats	Asia	Mosquito
Parasitic meningaencephalitis	Angiastrongylus cantanensis	Rats	Pocific islonds and Asia	Ingestion of infected land snails and prowns
Strongylaidiasis	Strongylaides stercaralis	Dogs	World-wide	Contact with infective larvae which penetrate the skin
Trichinosis	Trichinella spiralis	Swine, rodents, and wild carnivores	Warld-wide	Ingestion of pork and ather flesh containing viable cysts
Visceral larva migrans (Taxacariasis)	Toxocara canis	Dogs	Warld-wide	Swallawing dog and cat round-worm eggs
		4. RICKETTSIAL DISEASES		
Boutanneuse Fever	Rickettsia conori	Dogs and rodents	Europe and Africo	Bite of infected ticks
Murine typhus	Rickettsia mooseri	Rats	North America	Infected rodent fleas
Q Fever	Coxiella burnetii	Sheep, cattle, goats, fawl, and ather mammals	World-wide	Mainly airborne, although milk may be a vehicle & occasionally ticks
Rickettsial pox	Rickettsia akari	Mice	Eastern USA and USSR	Bite af infected rodent mites
Scrub typhus	Rickettsia tsutsugomushi	Rodents	Asia, Australia and East Indies	Bite of infected larval mites
Spotted Fever	Rickettsia rickettsii	Rabbits, field mice, and dags	North and South America	Bite of infected ticks or their crushing on the skin
		5. VIRUS DISEASES a. Arthropod-borne		
Chikungunya	Graup A Virus		East and South Africa	Mosquito-Culex and Aedes spp.
Eastern Encephalitis	Group A Virus	Wild birds, domestic fowl, horses, mules, and donkeys	Eastern Canada, USA, Mexico, Panama, Trinidad, Colambio, Brazil, and Philippines	Mosquito-Culiseta melanura and Aedes sp.
Mayaro	Group A Virus		Trinidad, Colombia, and Brazil	Unknown

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		5. VIRUS DISEASES (Continued) a. Arthropod-borne (Continued)		
Middelburg	Group A Virus	Sheep	South Africa	Mosquito - Aedes sp.
O'nyong-nyong	Group A Virus		Uganda	Mosquito
Sindbis	Group A Virus	Birds	Africa and India	Culicine mosquitos
Venezuelan Encephalitis	Group A Virus	Rodents, Wild birds, domestic fowl, horses, mules, and donkeys	Venezuela, Colombia, Brazil, and Trinidad	Mosquito - Mansonia titillans
Western Encephalitis	Group A Virus	Wild birds, domestic fowl, horses, mules, and donkeys	Canada, USA, Mexico, Trinidad, British Guiana, and Argentina	Mosquito - Culex tarsalis, Culiseta melanurce
Bat Salivary Gland	Group B Virus	Bats	Western United States	Unknown
Central Europegn Encephalitis	Group B Virus	Cattle, goats (serological evidence only) and wild birds	Central & Eastern Europe from the Baltic to the Balkans	Tick
Dengue, Type 1	Group B Virus	Monkeys and bats (serological evidence only)	South & Southeast Asia, Oceania, and Pacific	Mosquito
Dengue, Type 2	Group B Virus		Circumglobal in the Tropics	Mosquito - Aedes aegypti and Aedes spp.
Dengue, Type 3	Group B Virus		Philippines and Thailand	Mosquito - Aedes aegypti and Aedes spp.
Dengue, Type 4	Group B Virus		Philippines	Mosquito - Aedes aegypti and Aedes spp.
Diphasic Meningo-Encephalitis	Group B Virus	Cattle and sheep	USSR	Tick (milk)
Ilheus	Group B Virus		Northern South America, Trinidad, and Central America	Mosquito
Japanese B Encephalitis	Group B Virus	Wild birds, swine, horses, and cattle	Japan, China, Taiwan, Thailand, Malaya, Burma, India, Guam, Philippines, Australia, and New Guinea.	Mosquito - Culex tritaenorhynchus and Culex gelidus
Kyasanur Forest Disease	Group B Virus	Monkeys, small mammals	Mysore and India	Tick - Haemaphysalis spinigera
Louping Ill	Group B Virus	Sheep, goats and grouse	Great Britain	Tick - Ixodes ricinus -
Murray Valley Encephalitis	Group B Virus	Wild birds	Australia and New Guinea	Mosquito - Culex annulirostris
Omsk Hemorrhagic Fever	Group B Virus	Rodents, muskrats and goats	Omsk, Siberia, USSR	Tick-Dermacentor pictur, Dermacentor marginatus; goat milk borne

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		5. VIRUS DISEASES (Continued) a. Arthropod-borne (Continued)		
Powassan	Group B Virus	Squirrels	Ontario, Canada	Tick
Russian Spring-Summer Encephalitis	Group B Virus	Birds, small mammals and sheep	USSR	Tick
St. Louis Encephalitis	Group B Virus	Wild birds and domestic fowl	USA, Caribbean Islands, and Northern South America	Mosquito - Culex tarsalis & Culex pipiens - quinquefasciatus complex, culex nigri palpus
Spondweni	Group B Virus		Southern Africa	Mosquito
Wesselsbron	Group B Virus	Sheep	East and South Africa	Mosquito - Aedes spp.
West Nile	Group B Virus	Wild birds and horses	Africa, Near East, and South Asia	Mosquito - Culex univittatus (Egypt) Culex pipiens
Yellow Fever	Group B Virus	Monkeys and marmosets	Tropical Central & South America and Africa	Mosquito - Aedes aegypti, Haemagogus sp., Aedes leucocelanenus (S.A.) Aedes africanus (Africa) Aedes simpsoni (Africa)
Zika	Group B Virus	Monkey	Nigeria and Uganda	Aedes africanus
Apeu	Group C Virus		Brazil (Para)	Aedes aegypti
Marituba	Group C Virus		Brazil (Para)	Aedes aegypti
Oriboca	Group C Virus		Brazil (Para)	Aedes aegypti
Bunyamwera	Group Bunyamwera Virus		East & South Africa	Mosquito
Germiston	Group Bunyamwera Virus		South Africa	Mosquito
Guaroa	Group Bunyamwera Virus		Colombia and Brazil	
Ilesha	Group Bunyamwera Virus		Nigeria	
Bwamba	Bwamba Virus	Monkeys	East, Central and West Africa	Mosquito Aedes spp.
California Encephalitis	Group California Virus	Hares and squirrels	United States	Mosquito Aedes spp.

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		5. VIRUS DISEASES (Continued)		
		a. Arthropod-borne (Continued)		
Catu	Group Guama Virus		Brazil	
Guama	Group Guama Virus		Brazil	Mosquito
Oropouche	Group Simbu Virus		Trinidad and Brazil	Mosquito
Quaranfil	Group Quaranfil Virus		Nile Delta of Egypt	Tick
Argentinian Hemorrhagic Fever	Ungrouped Virus	Rodents	Argentina	Rodent/mite?
Bwamba Fever	Ungrouped Virus	Monkeys	Uganda	Mosquito – Aedes spp.
Colorado Tick Fever	Ungrouped Virus	Squarrels, porcupines, and small rodents	Western United States	Tick – Dermacentor andersoni
Crimean Hemorrhagic Fever	Ungrouped Virus	Hares	Southern USSR	Tick – Hyaloma marginatum
Nairobi Sheep Disease	Ungrouped Virus	Sheep	East Africa	Tick
Rift Valley Fever	Ungrouped Virus	Sheep, goats and cattle	Africa	Mosquito – Aedes caballua, Aedes spp. Contact on autopsy or handling fresh meat
Vesicular stomatitis	Ungrouped Virus	Swine, cattle and horses	North and South America	Contact exposure and insect bites
		b. Not Arthropod-borne		
Bolivian Hemorrhagic Fever	Virus	Rodents	Bolivia	Rodent urine?
Contagious Ecth ma	Virus	Sheep and goats	World-wide	Occupational expasure
Cowpox	Virus	Cattle	World-wide especially where smallpox exists	Contact exposure
Encephalomyocarditis	Virus	Rats, mice, squirrels, swine, monkeys, and baboons	World-wide	Environmental contamination
Foot and Mouth Disease	Virus	Cattle, swine, and related species	Europe, Asia, Africo, and South America	Contact exposure. Man is quite resistant
Infectious Hepatitis (Human)	Virus	Sub-human primates	World-wide	Contact exposure.

EPIDEMIOLOGICAL ASPECTS OF SOME OF THE ZOONOSES (Continued)

9

DISEASE	CAUSATIVE ORGANISM	PRINCIPAL ANIMALS AFFECTED	GEOGRAPHICAL DISTRIBUTION	PROBABLE VECTOR OR MEANS OF SPREAD
		5. VIRUS DISEASES (Continued) b. Not Arthropod-borne (Continued)		
Influenza and parainfluenza including Type A (Swine and equine) and Sendai (Type D)	Virus	Swine and rodents	Asio and Europe North America	Contact exposure
Lymphocytic Choriomeningitis	Virus	Rodents, swine, and dogs	World-wide	Virus contominates food and environment
Newcastle Disease	Virus	Fowl	World-wide	Occupotional exposure
Pseuda Cowpox	Virus	Cattle	World-wide	Occupational exposure
Psittacasis-Ornithosis (Bedsonia infections)	Virus	Birds, related virus faund in cattle and cats	World-wide	Contact and occupational expasure
Rabies	Virus	Dogs and biting vertebrate animals	World-wide except Australia, New Zealand, Great Britain, Scandinovia and parts of Western Europe. A number af islands are also free	Bites of diseased animals
Simian Herpes (B Virus)	Virus	Monkeys	World-wide	Bites af monkeys Occupational exposure
Cat Scratch Fever	Unknown*	Cats and dogs	World-wide	Wounds and scratches

*Virus suspected, recent investigation indicates that an acid-fast organism may be the causal agent.

NOTE: Many proved zoonoses, particularly helminth infections af relatively rare occurrence have been omitted, as well as those diseases caused by fish and reptile taxins.

Prepared by: Veterinory Public Heolth Section, Communicoble Disease Center, Public Heolth Service, Atlonto, Georgio

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A General Practitioner's Approach to

Phobia and Childhood Phobia

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PHOBIA IS A DEEP FEELING of insecurity[17] expressed in an exaggerated and unreasonable fear that sometimes reaches panic. It may also be expressed in somatic language as nausea, faintness, sweating, palpitation, rapid breathing, tremors, etc. Phobia is seen in about 20 per cent of the "normal" and "neurotic" population and about two to three times more often in women than in men. [14, 18]

Phobics live constricted lives, preoccupied and over-concerned about their physical condition. More than 75 per cent of them have somatic complaints as their major concerns when they first consult their family doctors.[8] The family doctor is the first medical contact, and with an appropriate attitude and proper handling he may be able to help or even "cure" these patients. In the poorly-handled patients, however, the phobias have a good chance of becoming chronic, possibly leading to lifetime handicapping diseases.

This paper is written in an attempt to help the busy family doctor avoid handling such cases unsuccessfully. For that reason I shall concentrate on the initial interviews and shall not deal with the deep dynamics of the phobia or take up the long-term therapy for chronic cases.

Dr. Al Salih was a fellow in child psychiatry at the Psychiatric Institute of the University of Maryland when he wrote this paper. He is now on the staff of the Mid-Missouri Mental Health Center, in Columbia.

TYPES

Freud[9] divided phobia into two kinds:

1. *Common (or universal) type:* The patients seem to have exaggerations of the normal cultural fears of such things as the dark, illness and death.

2. *Specific type:* The patients seem frightened of objects which normal people don't fear, such as cars, elevators, streets, etc.

Other authors[15, 18] have listed three types:

1. *Incipient type:* Patients with a certain type of personality trait are more vulnerable to a phobic reaction than are others. The vulnerable ones are dependent, immature people with a strong avoidance behavior.

2. *Acute type:* Such patients are mostly between the ages of 20 and 40, and they have marginally adjusted to their environments prior to a particular phobic incident. In the first attack, the patient is confused and unable to think clearly. He acts as if he had been taken by surprise. The family doctor can be of most help to this type of patient.

3. *Chronic type:* These are mostly patients with untreated acute episodes, and it is they who are seen most frequently. The longer the chronic condition lasts, the greater is the tendency for the patient to build his life around his symptom, and to find ways of avoiding the phobogenic situation. This avoidance eventually restricts his social life.

There are some cases of acute panic that clear up without medical intervention,[3] but once an acute state becomes a chronic one, it may stay indefinitely,[8] and may fluctuate in intensity from time to time. Some chronic patients remain rigid, and their phobias don't spread.[11] In others, a phobia may spread to in-

volve the patient's entire life and make him a housebound, crippled individual.[8] What makes the phobia spread to other parts of the patient's life probably depends on several factors, such as the individual's psychodynamics, the severity of the first attack, the patient's age, his attitude toward his environment, his "life-stress" situation, and secondary gains.[18]

PHOBOGENIC OBJECTS

The phobogenic objects are always non-human, such as spaces (open or closed), public places (beauty shops, stores, movie theatres, hospitals), locomotive vehicles (automobiles, trains, buses, elevators), and animals (horses, dogs, cats). In some instances the objects actually are human but they are seen as symbols rather than as people: the dentist, the physician, the policeman, a crowd. In such an instance the physician is not a threat outside of his office, nor would the policeman be a threat if he were wearing civilian clothes.[1] Other phobogenic objects are rather primitive, and probably are remnants of childhood phobias[10] —dark places, thunder, strangers, heights. However there are some cultural fears—mice, spiders, rats, insects—which are often present in normal, healthy women.

THE PHOBIC PERSONALITY

In general, phobics are suggestive, imaginative and sensitive people. They do all sorts of favors for others, and they are liked by their friends and relatives. They are loved dearly by their parents, spouses and children, in part, probably, because of their easy-going personalities. They avoid conflicts and antagonisms regardless of the price that such avoidance costs. They are devoted to their therapists and follow recommendations precisely. It is a rewarding experience to work with such patients, for about 85 per cent of them are able to overcome their fears.[18] Success depends to a great extent upon the strength of the doctor-patient relationship, for the patient's trust in his doctor will guide him along the difficult, tedious road of therapy. Phobics usually tolerate a great deal of pain, and will do almost anything to please their doctors, in order to avoid disappointing or dissatisfying them.

THE FAMILY DOCTOR AND THE PHOBIC PATIENT

The family physician has a built-in capacity for helping such people. As a physician he has a great deal of interest in his patients, and he manifests a great deal of concern, hope and reassurance. He is a powerful, authoritative figure.[16] The phobic patient looks to him as someone who has wisdom and the "magic power" of healing. The patient knows that his doctor has helped many of his relatives and friends, and that he is determined to help him. There are many additional humanistic, built-in factors in the relationship between the family doctor and his patient, all of which make the family physician an ideal therapist for the patient with acute phobia.

PHASES OF TREATMENT

The treatment plan can be divided into three phases. The first is designed for the period of acute phobia. The situation should be regarded as a medical emergency that calls for immediate intervention.[18] If possible, the patient should be seen on the day that he first seeks help. It is unwise to give him an appointment for sometime during the next week, or to keep him on the waiting list. During the first interview, the patient is usually in a daze, and is unable to comprehend his situation. He is unaware of the part of his personality that is capable of being so annoying—so frightening.

The patient will articulate only with difficulty. He should be given enough time to relate the details of the traumatic incident, and to describe his apprehensions and fright. The physician's remaining calm and listening with an empathetic look on his face will have a tranquilizing effect on the patient, and will make a deep impression on him.

Letting the patient know that his feelings of anxiety and apprehension are recognized and understood is the second most important move for the physician to make. He can help the patient feel accepted by adopting a non-judgmental attitude and saying, "It sounds like a frightening experience." Again with minimal intervention, he can probe by suggesting, "I suppose you have felt much the same in some other situation." That constitutes an invitation

to the patient to relate a similar incident, and it also is a message of acceptance and understanding.

Sometimes it is necessary for the doctor to go into the patient's life story in a fairly detailed way in order to collect the proper information. For that reason most physicians need more than one interview with such patients. The second interview should follow the first as closely as the physician's schedule permits. The typical patient's life history often includes having been reared in a small, overprotective family, and having been discouraged from participating in competitive games and rough play. The patient has grown up with a tendency to exaggerate fears, and especially to fear physical harm. He feels inadequate, and thinks that too much is expected of him. He is afraid that he is unable to meet his relatives' expectations, and therefore that he faces the certainty of disappointing them. He knows he is unable to handle his frustrations and failures, and he has grown up avoiding all confrontations that might lead to such situations. His life history will show a behavior pattern of escaping and "running away." With a little effort from the physician, the patient can be made to see that pattern.

Probably the recent acute attack is the climax of a long, unfavorable life situation beset with minor crises, and it seems to the patient that there is no way out for him. *The family physician should avoid interpreting the unconscious material, no matter how obvious and close to the surface such material may seem.*

If the attack is severe, a medication may be used. Drugs should be regarded as a means of calming the anxiety-ridden patient. It is obvious that medicine cannot help him overcome his fears, but it may constitute a symbol of the doctor's desire to help, and it will support the patient's notion that the doctor is a magician, and medicine is a part of his concept of the doctor. The best tranquilizer is the one which the physician has used most often. It may be chlorpromazine (Thorazine), meprobamate (Miltown), chlordiazepoxide (Librium), or diazepam (Valium).[15] The doctor should give the medication, or a prescription for it, with a comment such as: "Here is something that is quite effective for your kind of illness." By those words he reassures the patient that his doctor knows what he is talking about[12]—that he has treated similar cases successfully. The phobic patient usually is aware of the absurdity of his difficulty, and thus is apt, otherwise, to suppose that he is the first person to experience it. Then, in the same breath, the doctor should sound a warning: "I don't want you to depend on this medicine, for it is just a crutch and can help you only temporarily." He should discourage the patient from using the medication on a regular basis. Rather, the patient should take the least possible amount for the shortest possible length of time. Sometimes the physician can give him a sample dose in the office, and a dose to take with him for use later, together with a small prescription to have filled if he feels unable to handle his anxiety until his next appointment. Such prescriptions very seldom need to be filled, but the patients can carry them in their pockets or purses for moral support. As an alternative, the patient may be told to call for an earlier appointment if he finds it difficult to wait until the agreed time for additional help. Seldom will the patient need to call.

The second phase of treatment begins after the initial interviews are over, after the emergency situation has subsided, and when the patient is quieter. The medication, if one has been used, is then discontinued or reduced to the "if needed" status. Now the physician has to try to reeducate the patient to tolerate discomfort, and to teach him how to handle his frustrations and failures.[19] In this attempt, the family doctor is in a position to expose the patient to the situations that he used to avoid. In essence, the physician tries to give the patient the guidance and encouragement that he missed during his childhood and youth. In other words, he gives the patient another chance to grow up and to mature emotionally.

The third phase of the treatment is the physician's attempt to enlarge the patient's social circle. The patient probably has lived a constricted, socially-deprived life. The doctor tries to encourage him to look around, to join social clubs and activity groups, and to adopt a hobby or sport. In other words, he encourages him to make his life more variegated—more interesting.

In general, the first phase of treatment may take a week or two, including an average of three or four visits; the second phase may take six months to a year, with one or two visits per month; and the third phase may last a year or two years, with one visit every other month or even less frequently. Without the second and third phases of the treatment, the patient is very likely to regress into the initial acute state that I have already described, and eventually to pass into the chronic condition that requires much more effort and really long-term psychotherapy.

THE FAMILY DOCTOR AND CHILDREN'S FEARS AND PHOBIAS

The family physician very often is consulted by parents about their children's fears, and how they should handle them. The child should be evaluated physically to exclude any major illness such as deafness, retardation or even a childhood psychosis. If the child is physically well, it is easier and more effective for the physician to work with a cooperative parent than with the child.[6]

Phobia, as we see it, is a learned behavior. Because the family physician knows the family members, there is a good chance that he can spot the main source of the child's fear. More likely than not, it is related to a fear of his mother's. If the mother is the source, she can explain her phobias to the child, saying perhaps that she has had such a fear since she was a child. Although she is now grown up and knows better, she still feels uncomfortable in certain situations. Many times the father is forgotten, but he too can be a great help, here, in explaining the situation to the child. Proper reassurance and a proper amount of explanation and illustration may be enough to help the child. Many children's fears can be considered "normal" or transistory.[5]

A particular mental problem of childhood—the school phobia—is likely to give the family doctor special difficulty. The child may refuse to go to school, giving as an excuse that he is afraid of a "cruel" teacher or that he fears being beaten up by a group of his peers. Or he may transfer his phobia into a somatic complaint—that everytime he attends school or its related activities he suffers nausea, vomiting or headache. The difficulty may be misdiagnosed at first.[7, 13]

School phobia should be distinguished from the minor dislike for school that everybody has experienced at one time or another during his school years. In such a case the family physician checks the child physically, and if he is well he is sent back to school the same day. In a genuine case of school phobia it is unnecessary to send the child back to the classroom or to any regularly required activity at first, although that is the ultimate goal. Sometimes one or both parents may have to escort the child to school, and stay with him there. Their attitude should be: "Yes, we know you are afraid, but you must go."[7] Eventually going to school will not be such a dreadful thing. The family doctor must be firm with the parent, and in turn the parent must be firm with the child.

Knowing the family situation, the family doctor may be able to tell that the school phobia is not merely the child's creation. He may recognize it as an indication that a family crisis has reached a peak, and that intervention is required. In a typical school-phobia case, there is an overprotective, dependent and immature mother with a distant, unaffectionate husband. Such a mother turns to her child for dependency and affection.[13] A school social worker can help the physician in counseling such a family. The mother may resist letting her child become independent,[13] but she can be encouraged to let him look for adventures, join in competitive games and let his personality grow in a normal way.

SUMMARY

The family physician, with his built-in transference and traditional authoritative role, is an ideal therapist for patients with acute phobic reactions. The initial interviews have been discussed, and the long-term guidance of the patient has been outlined. Also, some attention has been paid to the possibility of handling the situation by working with the parents, particularly when the symptom is school phobia.

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Clinical Pathologic Conference No. 489

Infant convulsions, hypoglycemia

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SUMMARY OF CLINICAL FINDINGS

A FIVE-MONTH-OLD WHITE GIRL was referred to University Hospitals for evaluation of a convulsive disorder. The child was the product of a normal pregnancy and delivery. Her birth weight had been 6 lbs., 5 oz., and length 18½ in. She had had a a normal feeding and development history until the onset of her current illness.

At the age of 2½ months the child had a "staring spell" which lasted several seconds, but no sequelae. At 4½ months of age she had had a mild upper-respiratory infection, and was drowsy during the daytime. An episode of jerking of her left arm and leg, followed by choking and coughing, occurred at that time, and the patient was seen by her family physician. A diagnosis of mild pneumonia was made.

On the following day the patient had an episode of jerking of the left hand lasting a few seconds. Her family physician performed a lumbar puncture and subdural taps, but the findings were normal. Phenobarbital was given her for sedation. During the ensuing week the infant continued to have upper-respiratory symptoms, but they slowly improved on antibiotics.

During the two days prior to her admission to University Hospitals, the child had two episodes of apnea without convulsions. The spells lasted several minutes and required resuscitative measures, and after each apneic period she recovered immediately, except for mild drowsiness. On the morning of her admission she had had a single grand mal seizure, and she arrived at the University Hospitals Pediatrics Service in a post-ictal state.

Physical examination on admission revealed a well-developed child who was somewhat lethargic but responded well to stimuli. Her heart rate was 152/min., and her respirations were

30/min. The occipitofrontal circumference was 40.5 cm., and the fontanelles were small and soft. There was no evidence of upper-respiratory infection. The liver was palpable 2 cm. below the right costal margin. A neurologic examination revealed no abnormalities except poor muscle tone.

Initial laboratory studies included a normal urinalysis; a hemoglobin of 12.3 Gm. per cent; and a white blood cell count of 11,100/cu. mm., with a normal differential count. The fasting blood sugar on admission was 8.0 mg. per cent. The protein-bound iodine was 7 mcg. per cent, and the cholesterol was 200 mg. per cent. The serum sodium was 135, the potassium 5.5, the chloride 105, and the phosphorus 6.3 mEq./L. A chest x-ray was within normal limits.

On the day following admission, the patient had a single left-sided convulsion, and treatment with Dilantin was started at that time. She had no further seizures during her hospitalization.

Repeat fasting blood sugars were taken, and values ranging from 0 to 8 mg. per cent were obtained. A test dose of glucagon was given, and the blood sugar increased from 34 to 64 mg. per cent 30 minutes after administration of the drug. A glucose tolerance test was performed. It showed a rise in blood sugar to 158 mg. per cent at the end of one hour. A leucine load test caused consistent drops in blood sugar values 30 and 60 minutes after ingestion. The patient was given a low-leucine diet, prednisone 2 mg./Kg./day, and glucagon 0.2 mg. b.i.d.

Following those studies, the patient was operated upon. Her blood sugar immediately following the operation was 273 and on the following morning it was 720 mg. per cent. During the operation and immediately afterward, she was given intravenous hydrocortisone.

During the first postoperative day, the patient developed a sudden arrest of cardiac and pulmonary function, and she died despite resuscitative measures.

CLINICAL DISCUSSION

Dr. J. D. Brown, Internal Medicine: This CPC concerns an infant with peculiar spells and hypoglycemia. Mr. Allen Lang will discuss the case on behalf of the students.

Mr. Allen G. Lang, junior ward clerk: This infant showed normal growth and development throughout her brief life, and presented no significant abnormal findings on physical examination. But she suffered from intermittent convulsive or apneic spells. It is our impression that her problem consisted of prolonged hypoglycemia associated with leucine sensitivity. Yet there appears also to have been an organic, pathologic process present, and we think it most likely that is was a beta-cell hyperplasia. There are reasons for our conclusion, but I should like to discuss them later.

The possibilities that must be included in the differential diagnosis of infant hypoglycemia are numerous, including hepatogenic disorders, endocrinopathies, enzymatic disorders and other hyperplastic and neoplastic processes. As possibilities in this case, we might first consider the hepatic disorders, including hepatocellular destruction and the glycogen-storage diseases. Neither of these was suggested by the history, however, and hepatomegaly was not reported. Furthermore, glucagon stimulation resulted in increased blood glucose levels, and the patient's glucose tolerance curve was not elevated, as it often is in these cases. Two metabolic disorders were also ruled out—galactosemia and hereditary fructose intolerance. The infant did not exhibit any symptoms soon after birth, as galactosemia patients usually do, and she had no history of nausea, vomiting, diarrhea, jaundice or failure to grow and thrive. However a third metabolic disorder, leucine sensitivity, was very much evident, as demonstrated by the drop in her blood glucose values following a leucine load test. This condition characteristically appears in infants between three and six months of age, and has been found associated with insulinomas, beta-cell hyperplasia and idiopathic hypoglycemia.[1, 2]

This finding appears greatly to limit the possibilities in this child's case. We have two reasons for believing that this girl had one of these three sorts of conditions in addition to a leucine sensitivity. First of all, the hypoglycemia was apparent at other times than just after meals, when a high intake of protein might have accounted for it. Second, though a low-leucine diet was attempted, the hypoglycemia persisted.

Another point to be considered in the differential consists of insulin hypoantagonism, as manifested in pituitary hypofunction, adrenal cortical hypofunction and adrenal medullary hypofunction. These reflect failures in gluconeogenesis or glucogenesis. If the deficiency involves ACTH or the glucocorticoids, hypoglycemia usually occurs after fasting, and a late hypoglycemic response is seen in the glucose tolerance curve. If the deficiency involves somatotrophic hormone, dwarfism generally occurs. A lack of epinephrine response to hypoglycemia occurs in adrenal medullary hypofunction, and one can best detect it by measuring the urinary catecholamines. Since none of those signs were present in this infant, and since none of the conditions they suggest are associated with leucine sensitivity, these possibilities may reasonably be disregarded in this case.

Another possibility, though an obscure one, is an extrapancreatic tumor. But in addition to the fact that there is no known association between it and leucine sensitivity, such a tumor tends to be slow growing and rather large. This child apparently had no palpable masses. Furthermore, the occurrence of such a tumor in so young a child has been reported only very rarely. I found only two such reports—one of a Wilms' tumor in a five-year-old, and the other of a nephroblastoma in a child whose age was not given.[2]

Finally we are left with two possibilities—excessive insulin secretion and a catch-all category, idiopathic hypoglycemia. In view of the fact that this child did not respond to medical treatment but became hyperglycemic after an operation during which something presumably was removed from her body, we felt that hers probably was a case of insulinoma or beta-cell hyperplasia, rather than of idiopathic hypoglycemia. Differentiating between those two on a clinical basis, unfortunately, is nearly impossible. The only test that seems to have some value, the tolbutamide test, apparently was not performed. Children with insulinoma also have fairly normal glucose tolerances, in many instances, just as seems to have been true in this case. However we regard that condition as improbable. As recently as 1965 over 400 cases of insulinoma had been reported in the literature, but only two or three of them had occurred in patients under one year of age.[3] Hyperplasia, on the other hand, has been more prevalent, even in children of non-diabetic parents, and the parents of the child under discussion presumably were non-diabetic. It has been a well-recognized condition in children with diabetic or prediabetic mothers. Furthermore, hyperplasia has been noted with increasing frequency in leucine-sensitive children.

I repeat, then, that in our opinion this infant suffered from hypoglycemia associated with a beta-cell hyperplasia and leucine sensitivity.

Dr. Brown: Dr. Read, from the Department of Pediatrics, will discuss the case for the staff.

Dr. C. H. Read, Pediatrics: The diagnosis and treatment of children and small infants with hypoglycemia always seems to constitute a considerable problem, and the patient being discussed this afternoon is certainly no exception. This child began to have symptoms, as is noted in the protocol, at the age of 2½ months, and those symptoms were recurrent. Interestingly, one of the prominent symptoms was apnea. It is an often-overlooked but significant sign of hypoglycemia in small children—probably more often-overlooked and more significant than in adults. The fact that the symptoms began so early fairly well rules out the cause of hypoglycemia which was described by Ulstrom and Colle[4] and which they designated "ketotic hypoglycemia." It usually begins in children about two to three years of age. So that is a diagnosis that doesn't seem likely.

Among the physical features of the patient that were noted in the protocol was the smallness of her head. Its circumference was just 40.5 cm. That figure is no more than slightly larger than the expected measurement of the head of a newborn infant. Perhaps the child had a small brain, and possibly that was the reason why she apparently needed so little in the way of glucose to live as long as she did. She also was described as lethargic, but we are told that she "responded to stimuli." The exact nature of the stimuli was not described. It is significant that her liver was not large, and as Mr. Lang has said, that fact fits with the likelihood that the child did not have a serious liver disease. Some other significant negative findings were the lack of jaundice and spleno-

megaly. There was no reducing substance or acetone in the urine. The calcium, phosphorus and electrolytes were normal. The outstanding features in the laboratory data were the remarkably low blood-sugar levels. Apparently 0-8 mg. per cent was found repeatedly. Presumably these measurements were determined by the glucose-oxidase method, which measures true blood sugar. The values may have been especially low because certain glucocidic substances such as glutathione and uric acid interfere with this reaction and produce falsely low values. Nevertheless, it seems likely that we are dealing with significantly low levels of blood sugar. In addition, the response to glucagon demonstrated that the liver was able to respond to this hormone by glycogenolysis. The glucose-tolerance curve was quite high at one hour, and that is not unusual in children with hypoglycemia. Finally, there was a response to leucine.

Some significant data are lacking. We have no insulin assays, we have no measurement of catecholamines, we have no growth-hormone assays, and we have no 17-hydroxysteroid assays. Those data would have been very useful to us in arriving at a definitive diagnosis.

The liver is central to the control of blood sugar in the body. Glycogen storage occurs there, as well as gluconeogenesis from amino acids and from glycerol, so that severe disturbances of liver function such as in glycogen-storage disease are commonly associated with hypoglycemia. The fact that there was nothing in the clinical or laboratory data to suggest liver disease makes it seem likely that the baby had normal liver fuction.

I now wish to discuss the substances which ordinarily raise the blood sugar, and the absence of which might be associated with hypoglycemic episodes. One of the most important of these is pituitary growth hormone. A fall in blood sugar to low levels is associated with the release of growth hormone from the pituitary and a rise of glucose and of free fatty acids denoting fat catabolism.[5, 6] The fact that this child was of normal size apparently makes it very unlikely that she was suffering from a lack of growth hormone. In two instances in which congenital hypopituitarism has been described, and in which there was a lack of growth hormone, there was a failure of growth so that at 10 weeks of age the child was the size of a newborn infant and had hypoglycemia which had begun in the neonatal period.[7] Therefore a lack of growth hormone is unlikely to have been the cause of the problem in this instance.

As for the adrenal, there we have a hormone which causes gluconeogenesis from amino acids. In this particular instance there was no physical evidence of any abnormality of the external genitalia such as one might expect in congenital adrenal hyperplasia, and furthermore there was no pigmentation of the skin, the serum electrolytes were normal, etc.—all of which make it unlikely that the adrenal cortex played a prominent role. In the absence of the catecholamines there may be hypoglycemia, and one such case was described by Broberger and his colleagues in about 1959, I think. We have no information on this patient regarding that point, but apparently the condition is very rare. The catecholamines have two methods of functioning. They may raise the blood glucose by means of glycogenolysis, or they may inhibit the release of insulin at the beta-cell level. Glucagon deficiency, to my knowledge, has not been described as a cause of hypoglycemia. It still is almost a hormone in search of a function, but it probably has a direct stimulating effect on insulin secretion. Therefore we have a certain amount of data suggesting that none of these substances which tend to raise the blood sugar was absent, and thus none of them seems to have had any connection with the baby's hypoglycemia.

The hormone which most frequently is responsible for a drop in blood sugar is, of course, insulin, and it is released by secretin and pancreozymin from the small intestine.[7] This has been recognized in recent years because orally administered glucose causes a far greater rise of serum insulin than does intravenously administered glucose, despite the fact that the intravenously administered glucose causes a greater rise of blood glucose. The release of insulin is also stimulated by amino acids, and this has caused some confusion. Cochrane and his co-workers[8] pointed out in 1956 that if one administered leucine, he could demonstrate a drop in blood glucose, but it has been only

within the past two years that it has been recognized that many of the essential amino acids cause a drop in blood sugar and that the mechanism is a release of insulin.[9]

Consequently, I think that there is a real question about whether there is any such thing as a specific leucine sensitivity. In other words, *everybody* is leucine-sensitive, but patients who have insulin-cell adenomas or hyperplasia of the beta cells can be expected to respond to a greater degree. It seems likely, therefore, that the leucine sensitivity which has been talked about for the past 10 years will soon be recognized as simply an *exaggerated* response on the part of over-functioning beta cells. Arginine is the most potent of the amino acids in stimulating insulin-cell secretion. Incidentally, because the amino acids are synergistic with glucose, one sees an even greater response of serum insulin when one administers glucose and arginine together.[10]

Tolbutamide, although it doesn't occur naturally, also causes a release of insulin from the beta cells, and it has been used as a very good way of measuring the ability of the beta cells of the pancreas to release insulin. Both the leucine test and the tolbutamide test have been suggested, particularly by the group at the University of Michigan, as a method of demonstrating whether there is excess insulin available in the beta cells.[11] As the test was first proposed, its reliability was equivocal, particularly in children, as Grumbach and his co-workers demonstrated in a recent publication.[12] It cannot be depended upon to differentiate between the normal child and the child with excess insulin. It is preferable to measure both the blood-glucose and insulin levels. Under these circumstances the patient with an insulin-secreting adenoma may not have a greater drop of blood sugar than the normal individual, but he does have a greater rise in terms of serum-insulin release. Unfortunately we do not have such information available on this patient.

The non-insulin-producing tumors that cause hypoglycemia have already been remarked upon, and I think the subject has been covered adequately for our purpose. They are large and are composed largely of mesenchymal cells. It is unlikely that they actually produce insulin. It seems that some other mechanism must be found to account for these patients' having low blood sugars.

Starvation was not a factor in the infant under discussion, but it is interesting that in Kwashiorkor, hypoglycemia is regularly observed, and blood-sugar levels below 20 mg. per cent are seen in children who exhibit no clinical symptoms whatsoever.[13]

It would seem likely that our patient had a severe degree of hypoglycemia, on the basis of the clinical and laboratory data available. It is unlikely that there were deficiencies of the hormones which cause blood sugar to rise. There is substantial evidence that there was an exaggerated response to leucine, and that plus the fact that the blood sugar remained consistently low in the fasting state, in my view, favors this child's having had an insulin-cell adenoma. It is possible that she may have had beta-cell hyperplasia with an absence of alpha cells, as has recently been described by Yoshinaga and his co-workers.[14] Under either of those circumstances, we should expect severe damage to the brain cells.

Dr. Brown: Thank you, Dr. Read, for a fine discussion and a clarification of the physiology of insulin secretion. Now I think we should ask Dr. Longnecker, from the Department of Pathology, to tell us what was found at surgery and at the postmortem examination.

Dr. D. S. Longnecker, Pathology: The first matter of interest is the contents of the surgical specimen. The Pathology Department received the tail and body of the pancreas, which the surgeon estimated was about 85 per cent of that organ. When the tissue was dissected, there was no gross evidence of adenoma. However the entire specimen was examined microscopically, and there was a poorly-encapsulated islet-cell adenoma. It actually was a rather poorly delimited area of islet-cell overgrowth, but there was a mass of it that measured 9 mm. in its greatest dimension. Special staining indicated that it was abundantly populated with beta granules, so there is no reason to doubt that it was the source of the excess insulin that could account for the hypoglycemia. The remainder of the surgically-resected pancreas had relatively small and normal-appearing islets.

In sections from the head of the pancreas—the portion that remained for examination at autopsy—there was an excess of islet-cell tissue. It was in the form of multiple overgrowth, each cell being many times larger than a normal islet, so that in addition to the diagnosis of adenoma based on the surgical specimen, we could diagnose adenomatosis in the non-resected portion of the pancreas.

Now for the question of whether the islet tissue in the autopsy was also functional and insulin-producing. The sections of the surgically-resected adenoma which were aldehyde-fuchsin stained by Dr. Halmi, of the Department of Anatomy, were abundant lavender beta granulations. He applied the same stain to the tissue obtained at autopsy, and the beta granulation in some of the cells made us think that the preservation was adequate for a reasonable evaluation. However, the majority of the cells contained no significant amounts of beta granulation, and it was our impression that there was a much lower content of beta granules than in normal islets, and obviously much less than in the adenoma.

We must leave to speculation the question of what might have happened if the patient had survived. Clearly there was an excess of islet tissue in the residual pancreas, and I think it very reasonable to wonder whether those cells might not have escaped from the control mechanisms and produced an excess of insulin sometime in the future.

Another question to be answered by the autopsy was whether the brain showed evidence of damage as the result of the hypoglycemia. The answer was clearly "Yes." There was evidence of significant damage, and Dr. McCormick will present further information about it.

Finally, we needed to determine a cause of death, and it was provided us in the autopsy examination of the abdomen. The bowel, from the duodenum distally, contained blood and gross evidence of hemorrhagic infarction. There was microscopic evidence of early infarction, and a number of the veins contained small thrombi. Those could be interpreted as venous thromboses, but the number of the thrombi was very small. Instead, they could be interpreted as resulting from severe venous congestion, with thrombosis incident to the congestion. The major mesenteric arteries and veins were patent, and the final judgment of the autopsy prosector was that the infarction had resulted from torsion of the mesentery—a volvulus, with venous obstruction.

At the operative site there was a bit of pancreatitis—an inevitable result of surgical manipulation. It was minimal, and of no clinical significance, I believe.

In summary, we found evidence of a functional islet-cell adenoma, and added evidence of excess non-functional islet tissue in the head of the pancreas. We found evidence of cerebral atrophy and recent neuronal damage. There was minimal pancreatitis. Finally, a recent infarct of the small intestine was the cause of death.

Dr. Brown: Thank you, Dr. Longnecker. Dr. McCormick, will you tell us about the findings in the central nervous system?

Dr. W. F. McCormick, Pathology: The illustrations that I shall show you will speak clearly for themselves. The child's brain was small, as you already know from the small head circumference reported in the protocol. The calvarium increases in size in proportion to the increasing size of the brain. If the brain is small, the head will remain small.

The most striking feature was the generalized atrophy. If it is not apparent to some of you, as you view this picture, it is because you have an insufficient frame of reference. The upper section is from a patient of the same age and sex, and the bottom section is from the patient under discussion. The very severe and generalized atrophy is, I think, obvious. This is the type of alteration which is constantly seen and reported in patients with profound hypoglycemia of some standing. There sometimes are other alterations that were absent in this case. Rather uniformly there is sector necrosis (necrosis of Sommer's section or of Rose's field H-1) in the hippocampus. Though apparent microscopically in this case, we did not see it grossly. Very commonly these patients have laminar necrosis of the cortex, but this patient did not have it.

The pituitary in our patient had a marked decrease of stainable hormone in the posterior lobe, indicating the rather severe damage to

the hypothalamic-hypophyseal system that is predictable in such a case. Again to give you a frame of reference, this is a normal posterior lobe with the aldehyde-thionine stain. This is the type of material you normally see in the posterior lobe, and this is postmortem material all about the same age and in a very nice state of preservation, in normal staining. Conversely, our patient had a marked deprivation and depletion of this material. Such findings constitute good evidence of the failure of the hypothalamic-pituitary system.

This next illustration is a good gross example of what we mean by "cortical laminar necrosis"—a change that is seen in a significant percentage of patients with severe hypoglycemia who have survived for some length of time. The center part of the cortex is totally necrotic. In the patient under consideration the process had not progressed to total necrosis, though there was marked neuronal loss in this area, the primary layer 3 of the isocortex.

At higher magnification, you can see a ribbon or band of pale tissue running through the middle of the cortex. It is a common finding in anoxic lesions, and is perhaps more constant in anoxic lesions than in hypoglycemic ones. First of all, in hypoglycemia there may not necessarily be anoxia, and normally in anoxia there is no hypoglycemia. The two really aren't the same, but they have certain similarities, and severe hypoglycemia tends to set up a pernicious cycle, in which stagnant anoxia and vasoparalysis are superimposed on the hypoglycemia. Then there may be a combination of lesions—those due both to vascular failure and to hypoglycemia *per se*.

Finally, I shall show you an example of what I mean by sector necrosis. A normal Ammon's horn (hippocampus) is shown here; Sommer's sector in this area (Rose's field H-1); and in this markedly discolored area on the other side is acute sector necrosis. In this case there was a rather profound anoxic necrosis of neurons in Sommer's sector, but without cavitation.

A number of other alterations have been described in hypoglycemics, but we won't go into them in detail, for we want to hear from Dr. Soper and others. In summary, this child's brain was severely damaged. It was quite small. It had severe generalized neuronal loss, maximal from layer 3 of the isocortex and bilaterally from Ammon's horn lesions. At best there was moderate Purkinje-cell loss (indicating an interesting difference between hypoglycemia and hypoxia), and there was no cortical laminar necrosis. The small size of the brain may have been due both to loss of neurons and, in part, to maturation arrest. Some indication of maturation arrest is the fact that Obersteiner's layer was still fairly prominent in the cerebellum.

Dr. Brown: Thank you, Dr. McCormick. Once the diagnosis of hypoglycemia has been established, it is always a very difficult problem for the surgeon, and I have asked Dr. Cornell, from the Department of Radiology, to tell us what, if anything, the radiologist can do to help him.

Dr. S. H. Cornell, Radiology: At the University of Michigan, 15 islet-cell adenomas of the pancreas were reviewed. Eighty-five per cent of them showed an avascular histologic pattern, and 15 per cent revealed numerous prominent vascular channels. In the vascular type, it is possible to obtain a tumor stain and visualize the lesion by angiography. Catheters are inserted into the femoral arteries. One catheter is put into the celiac artery, and the other into the superior mesenteric. Contrast material is injected simultaneously, and the pancreatic vessels are shown around the head, the body and the tail of the pancreas.

Figure 1 shows an islet-cell adenoma in the head of the pancreas which was demonstrated by that method. Most of such tumors measure only from 1 to 3 cm. in diameter, and therefore are difficult to demonstrate. They do not cause any displacement of vessels, nor is there any neovascularity. There is only a tumor stain. We have attempted this procedure on one patient and were unsuccessful in demonstrating the lesion.

At the University of Michigan two of six islet-cell adenomas were successfully demonstrated by angiography (Figure 2). It is possible to localize some of these tumors, and the chances of success probably justify an attempt.

Dr. Brown: This infant presented not only a diagnostic problem but also a therapeutic one. Since isolated adenomas are uncommon in infants, there is always a question of

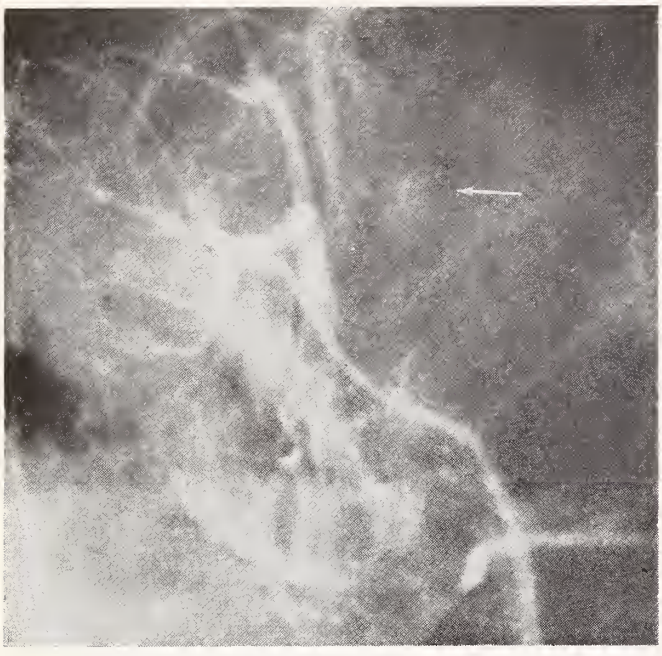


Figure 1. Islet-cell tumor of the pancreas. Reproduced, with permission, from Figure 1 in "Appraisal of Selective Angiography in Localizing Islet-Cell Tumors of the Pancreas," by Joseph W. Bookstein, M.D., in Radiology, April, 1966.

whether surgery is the correct type of therapy. I'd like to ask Dr. Samaan two specific questions. First of all, can insulin assay help in the diagnosis of this condition, and second, do you think Diazoxide therapy might be helpful?

Dr. N. Samaan, Internal Medicine, Veterans Administration Hospital: Unfortunately, we didn't obtain serum for insulin and growth-hormone assays. Thus I shall limit my remarks to our experience with other technics. First of all, hypoglycemias due to glycogen-storage disease, galactosemia and fructosemia are mainly excluded by clinical diagnosis. In those conditions the fasting blood sugar will be low, but after glucose administration there will be a continuous rise, of the diabetic type, for two to four hours. After glucose administration in those three conditions, we noticed a great rise in insulin secretion, but not while the patients were fasting. This contrasted markedly with the situation in insulinoma or idiopathic hypoglycemia of childhood, where the fasting insulin level is usually high. By "high" I mean a fasting blood sugar of 30 with an insulin level of 20 microunits. Twenty microunits may be normal in an individual with a fasting blood sugar of 80, but it is abnormal in someone who has a blood sugar of 30, and I think we had a child here who showed a fasting blood sugar of 25 with 35 microunits of insulin. I hope that what I have said will be of some diagnostic help.

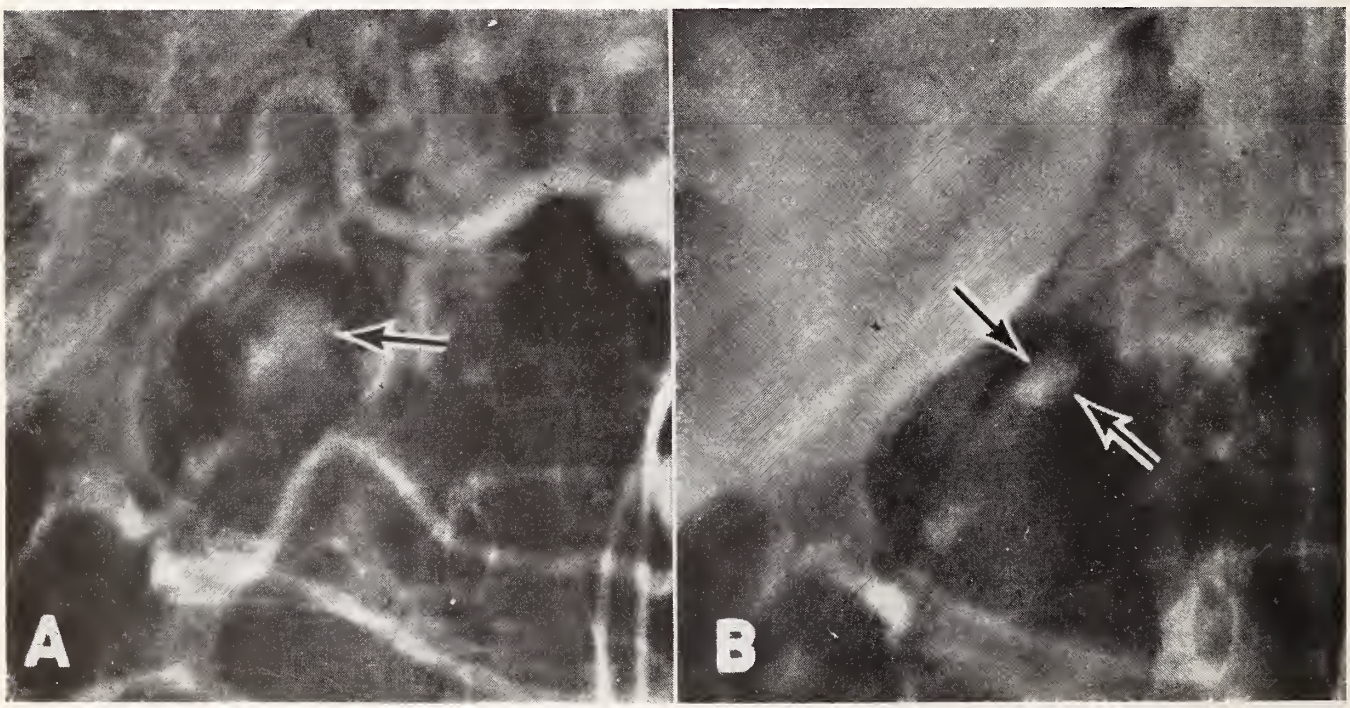


Figure 2. Insulinoma within the head of the pancreas. Reproduced, with permission, from Figure 6, A and B, in the article "Clinical Application of Selective Celiac and Superior Mesenteric Angiography," by Stanley Baum, M.D., in Radiology, February, 1965.

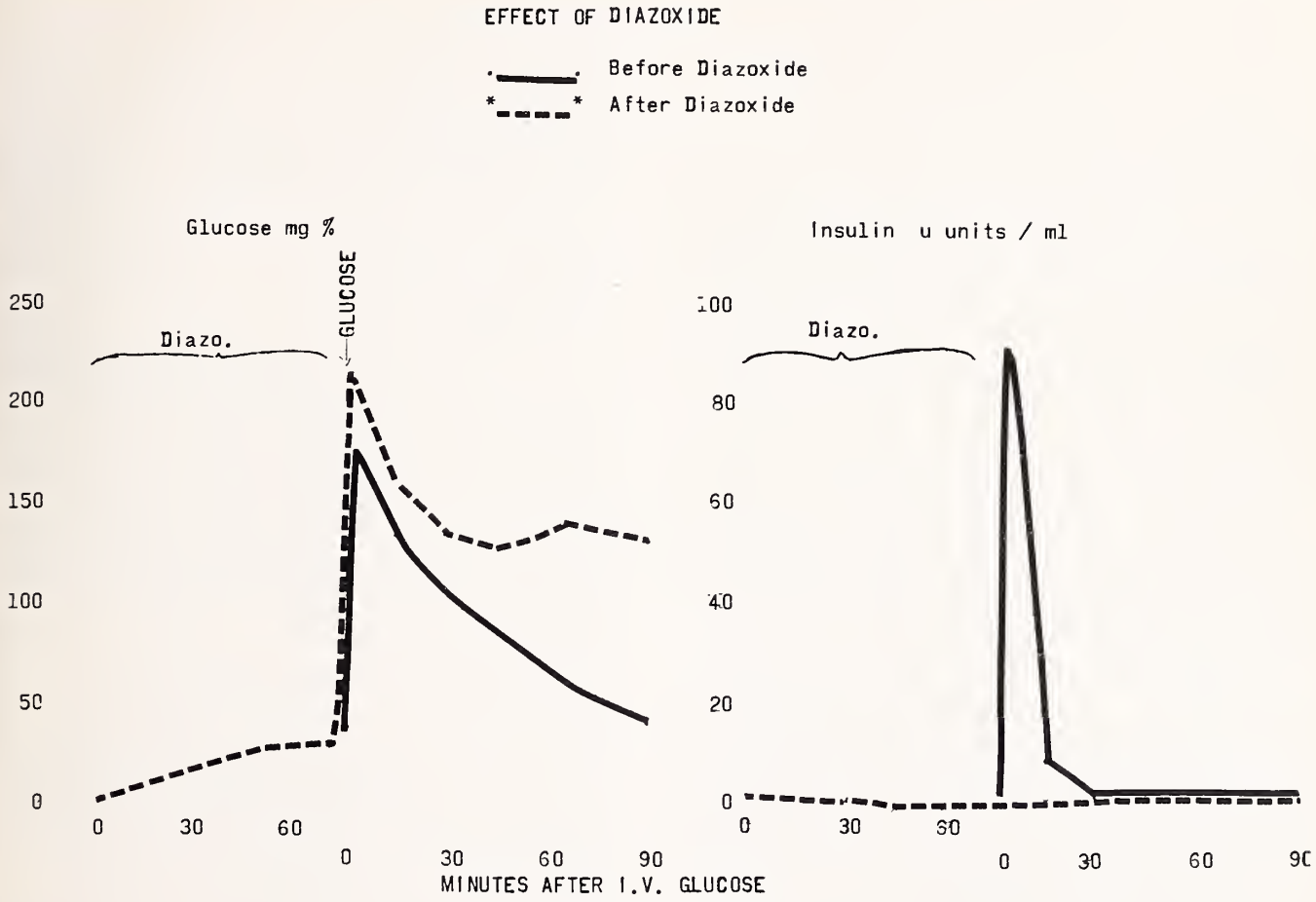


Figure 3. Effect of Diazoxide.

When the cause of hypoglycemia cannot be corrected, as in idiopathic hypoglycemia of childhood or in multiple adenomatosis like this child's condition, or in cases of carcinoma of the pancreas with metastases, the current methods of treatment are unsatisfactory. In leucine-sensitive children, leucine intake is limited, but that is a very expensive method of treatment, and it is unsatisfactory from the nutritional point of view. Cortisone or adrenocorticotrophic hormones may be given, but they are no more than momentarily effective, and thus of limited value. Glucagon and epinephrine, similarly, are of little help. Partial pancreatectomy usually is unsuccessful, and complete pancreatectomy produces complete metabolic derangement.

Diazoxide, a thiazide derivative, is a salt-retaining substance that produces severe hyperglycemia and hypotension. It was introduced in 1962 for the treatment of hypertension. The first two hypertensive patients to be treated with this drug were admitted to the Royal Post-graduate Medical School Hospital with severe hyperglycemia, and their serum insulin levels were very low. Since that time the drug has been used in the treatment of hypoglycemia. It is noteworthy, however, that it can produce hypopotassemia as well as hyperuricemia.

Figure 3 demonstrates the effect of Diazoxide on blood sugar. We gave 400 mg. of Diazoxide by intravenous injection, and the patient's fasting blood sugar rose from 6 to 38 mg. per cent at the end of one hour. When the results of a glucose tolerance test were compared with those of a similar test that had been done the day before, abnormally high blood sugar curves were apparent. Diazoxide inhibited insulin secretion. So here is a drug that is very potent and has great effect on insulin release.

When Diazoxide was given by mouth for eight days in doses of 100 mg. q 6 hrs., there was a marked rise in the blood sugar curve, as compared with the blood sugar curve before the Diazoxide treatment. The solid line

represents the insulin secretion before Diazoxide, and the dotted line represents the insulin secretion afterward.

During the past three years this drug has been widely and successfully used in the treatment of idiopathic hypoglycemia, and in the treatment of carcinoma of the islet cells with metastasis. In order to produce good effects with this drug, however, one must combine it with chlorothiazide. The dose for children is 15 mg. per kilogram of body weight, or from 100 to 200 mg./day. One of the side effects of this drug is hirsutism, but otherwise it is a very safe drug to use in these cases.

Dr. Brown: Do you think that Diazoxide is a safe drug to use for long-term therapy in these children, in the hope that they will outgrow some of the abnormal mechanisms of insulin release?

Dr. Samaan: Yes, it has been used in some children for over two years, now. I think I can refer you to about five or six cases. I think the PROCEEDINGS OF THE ROYAL SOCIETY OF MEDICINE, last year, contained a report on five patients, some of whom had been kept on the drug for over two years with good effects.

Dr. Brown: I'd like to ask Dr. Soper to discuss some of the problems of these patients from the surgeon's standpoint. Incidentally, don't let Diazoxide scare you.

Dr. R. T. Soper, Surgery: I am amused at the difference between the reports on Diazoxide that have appeared in the medical and in the surgical literature. The surgical journals are replete with reports about the side effects of treating hypoglycemic children with high doses of steroids or Diazoxide, and they are likewise filled with favorable comments on pancreatectomy in the treatment of children with idiopathic hypoglycemia. As a matter of fact, one of the most recent such reports was a series of cases presented by Koop, *et al.*,[15] from the Philadelphia Children's Hospital. Forty-five children with idiopathic or spontaneous hypoglycemia (i.e., with no islet-cell tumors) who had been treated by pancreatectomy had been collected from the literature by those authors. Thirty-three had normal blood sugars postoperatively without additional drugs, and five others had normal blood sugars postoperatively with some drug treatment added. Two had required reoperation, at which time the pancreas remnant was found to have enlarged three or four times, so that a second pancreatectomy was necessary, but afterward their blood sugars were normal. I wonder whether our patient, if she had lived, might not have fallen into this last group, with regrowth or overgrowth of the pancreatic remnant leading to a recurrence of hypoglycemia.

It is difficult to decide upon the best therapy for every child with idiopathic hypoglycemia, but according to the general tenor of the surgical literature, if medical treatment does not control blood sugars adequately, or if it does so at the expense of significant or serious side effects, then surgery is indicated. The treatment of functioning islet-cell adenomas is clearly surgical. I don't think that there is a major difference of opinion on that question.

I should like to pose a question to Dr. Longnecker. In view of the large numbers of islet cells in the 10-15 per cent remnant of pancreas, why did the blood sugar rocket so high in the immediate postoperative period? Were the beta cells suppressed by the functioning adenoma, or what was the mechanism?

I feel it would be helpful if you could elucidate the cause of death in clinical terms. As far as I am concerned this infant died in shock and from blood loss. The entire small bowel was filled with blood from the ligament of Treitz to the sigmoid colon. Interestingly enough, the loss of blood occurred so rapidly that none flowed either from the nasogastric tube or from the rectum, and we had no idea that an internal catastrophe was occurring. We therefore did not start blood replacement. As to the reason for the hemorrhage, I have no explanation other than that, during closure of the abdomen, the anesthetic plane lightened intermittently, provoking forceful evisceration of the small bowel many times and requiring replacement under some tension and pressure. Thus, indeed, the potential for volvulus did exist.

Dr. Read: One thing which I think is important is that "idiopathic hypoglycemia" is not a diagnosis; it is a wastebasket category. The important thing is that now we have ways of making a specific diagnosis. When hyperinsulinism is demonstrated, one needs to find the source of the insulin and, preferably, remove

it. I think that then, if one is stuck, perhaps he can use Diazoxide, but I don't think he should temporize in these patients, for low blood sugars obviously don't do the brain any good. This is a situation in which the patient should be investigated promptly and treated as soon as the diagnosis has been made.

Dr. Longnecker: We presumed that there was not an excess of insulin postoperatively because there were so few beta granulations in the autopsy islet tissue.

Dr. Soper: You mean that consequently there was a suppressive mechanism?

Dr. Longnecker: Yes. It also seems likely that before surgery there were no granulations there—that those beta cells were under control and were not producing an excess of insulin.

SUMMARY OF NECROPSY FINDINGS

1. Functional pancreatic islet-cell adenoma (surgically resected pancreas)
2. Diffuse cerebral atrophy and gliosis
3. Hemorrhagic infarction of small intestine
4. Multiple small mesenteric venous thrombosis
5. Acute pancreatitis (postoperative), head of pancreas.

STUDENTS' DIAGNOSES

1. Beta-cell hyperplasia
2. Leucine sensitivity.

DR. READ'S DIAGNOSES

1. Insulin-cell adenoma
2. Leucine sensitivity.

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When billing for your Medicare services, do you take assignments? If so, is this approach compatible with your convictions? Or a matter of convenience?

R. F. Birge

President



HOW'S ABOUT PREPARING THAT REPORT FOR US?

With the onset of the New Year it is fitting for us to emphasize to the members of the Iowa Medical Society that this is their JOURNAL, and that whatever merit the scientific articles in it may have is dependent upon the members' submitting them.

Especially from the more heavily populated counties where the local medical societies regularly have guest speakers to present scientific lectures at their meetings, the presentations may in some instances be those guests' lectures, either in manuscript or in tape-recording form. But we urge every physician to report the interesting or unusual cases or problems that he has encountered in his own practice, or to report a series of cases, large or small. So often one hears a colleague say, "I should report that case," but somehow it just doesn't ever appear in print.

From the preparation of an article, and from a review of the pertinent literature, it is the author who derives the greatest benefit. Your colleagues do not expect you to write with the eloquence of Sir William Osler or William B. Bean. So please do your part to make the JOURNAL a publication of which you can be proud.

OLD FRIENDS REVISITED

Recently it was our privilege and pleasure to call upon some old friends, an elderly couple who were about to celebrate their sixty-fourth wedding anniversary. We came away uplifted in spirit, impressed by their example, touched by their devotion to one another, and inspired by the lesson that growing old together can be lovely and rewarding.

Though both were four score and ten, they were immaculately groomed, were a gracious host and hostess, and carried on an interesting conversation concerning old friends and current affairs. The still very pretty lady carries on with her music, playing the piano and organ. Her husband keeps occupied with ceramics, with painting and drawing and sketching. Both are blessed with keen minds and a delightful sense of humor. Though they have not been spared infirmity and illness, they do not dwell upon them.

These are friends who have faced the afternoon of life with a positive approach, rather than resignation to vacuous years. They are an inspiration and a joy to everyone.

Perhaps a greater effort by all who are concerned with the welfare of the elderly can help other people prepare for this period of their lives, and make them meaningful and happy years.

CARCINOMA OF THE BREAST

A review of the subject of carcinoma of the breast by a group at Harvard Medical School and Peter Bent Brigham Hospital, published in four successive issues of the NEW ENGLAND JOURNAL OF MEDICINE in August, 1967,* should be required reading for every physician who has any responsibilty for the care of women. The review not only analyzes the experience at that outstanding medical center as it is related to the current literature. It also presents the program of management of cancer of the breast at all stages of the disease which has been formulated at those institutions.

The opening paragraph of the study is one that should impress every thinking American and challenge the members of the medical profession: "There can be no doubt of the growing importance of breast cancer. This tumor stands unique as the commonest malignant tumor of middle-aged women and the leading cause of death in white women in the United States, 39 to 54 years of age. No single manifestation of cardiovascular or renal disease, no single infection and no complication of pregnancy or parturition takes such a toll of the mother in her prime."

In an effort to improve the care of patients with carcinoma of the breast, a special program was established in 1954 at Peter Bent Brigham Hospital as a division of the tumor clinic. Consultants in that special program saw patients at the time of their initial diagnosis and have followed them through the courses of their illness. During the 10-year period that terminated on December 31, 1963, there were 498 patients who were cared for under this program, and for whom follow-up data were complete to June 30, 1965. Of that number, 25 were seen in consultation only, leaving a group of 473 patients for analysis. Four of the patients were males, and they were also excluded from the study. Thus a total of 469 patients composed the study group.

Among the 469 women seen and treated for carcinoma of the breast at the Boston hospital, 248 had their first treatment there and were classified as "primary" cases in the study group. Twenty-nine of these had extremely advanced or preterminal disease when they first consulted a physician. A considerable number of those patients were not deemed suitable for extensive treatment by local surgery of any kind. One hundred sixty-seven underwent radical mastectomy, and there were three hospital deaths in this primary group of patients. After a follow-up period that varied from two to 10 years, 135 of the 245 surviving patients were free of their disease or had died of other causes during that period of time.

In addition to the primary group there were 221 patients who were referred for treatment of "secondary" disease, having undergone primary treatment elsewhere. Of those, 213 had recurrent or metastatic carcinoma of the breast and were designated as "referred secondary" cases. To those 213 patients there were added the 110 patients in the primary group who later developed recurrences. Thus there were a total of 323 patients treated for secondary disease during the 10-year period.

At the time the study period closed, on June 30, 1965, of the 473 patients treated for carcinoma of the breast during the 10-year period, 342 were dead; 131 were living; 45 of the deaths had been caused by other diseases; and 297 patients had died as a result of their breast cancer.

According to the authors, treatment of primary carcinoma of the breast has changed but little on the surgical service at the hospital during the 10-year period. Before the study was initiated, a policy of limiting radical surgery to clinical classes A and B (carcinoma limited to the breast and to the breast and axillary glands) had already been established. There has been increasing use of postoperative irradiation and of supervoltage therapy very recently. Chemotherapy and the use of corticosteroids have been introduced during the decade of study, and a series of 163 patients who have undergone either adrenalectomy or hypophysectomy in the palliative treatment of metastatic carcinoma of the breast during this period is of special interest.

* Moore, F. D., Woodrow, S. I., Aliapoulios, M. A., and Wilson, R. E.: Carcinoma of breast: decade of new results with old concepts. NEW ENGLAND J. MED., **277** (Aug. 10, 17, 24 and 31), 1967.

It is pointed out that follow-up observation calls for a reasonable balance between overzealous examination and neglect. It is suggested that follow-up examinations should be carried out every three months for three years, and every six months for the next three years. Mammography of the opposite breast has been found helpful in the early recognition of cancer, and it has been recommended that this be carried out at six-month intervals after the initial mastectomy. It has been reported that in patients surviving mastectomy for cancer for three years a lesion will develop in the remaining breast in 16 per cent of cases.

Emphasis is given to the genetic aspect of cancer of the breast, and reference is made to numerous articles in the literature that support that concept. That hereditary tendency is for breast cancer specifically, and not for malignant tumors in general. It is recommended that a specific effort be made to detect cancer of the breast in other members of the patient's family, particularly in sisters or aunts, and in the patient's mother if she is living. If the patient has daughters, an appropriate time must be chosen for a discussion of the possible risks and the measures which can be taken to reduce them in the succeeding years.

The review encompasses the many problems involved in the care of patients with breast cancer—biopsy, surgical indications, the role of therapeutic oophorectomy, radiotherapy, chemotherapy, palliative treatment of metastatic lesions, etc. The careful study of this excellent review will assure a more thorough understanding of the current concepts of this serious disease and the more recent methods of managing patients afflicted with it.

Too much emphasis just cannot be given to the importance of this disease, and to the early diagnosis of a localized lesion without spread, since it offers the patient her greatest likelihood of survival. Every physician should make his office an educational and detection center.

ACCELERATION OF MEDICAL EDUCATION CARRIED TO EXTREMES?

In recent years a few medical schools have admitted a number of carefully selected students after two years of premedical study at the college level. Several reports have indicated that these students have done exceptionally well and have compared very favorably with students who were admitted after four years of college.

Despite the reports of the success of a shorter period of preparation before admission to medical school, one cannot deny a feeling of skepticism about the wisdom of such a program. Surely the admission requirements demand that the two years of pre-medicine be devoted to the study of chemistry, physics, biology and mathematics. Few hours can be left for the study of literature, history, languages and the social sciences, or exposure to the arts. The four years of medical school are demanding, and the areas of study circumscribed. When is the student in the accelerated program permitted to explore other fields of interest and of challenge and of cultural value?

Now, in addition to the reduction in the premedical requirements, the University of Vermont College of Medicine has instituted a curriculum innovation which is described as a quiet revolution, a change which should be of great interest to everyone who has undergone the experience of a medical-school education.* The new curriculum is the outcome of six years of careful study by the faculty and is designed to meet the changing patterns of medical practice. The complexity of modern medicine produced a large number of medical specialties, and today large numbers of medical graduates are attracted to those specialties. Other graduates enter the fields of academic medicine or research. Family practitioners can no longer be considered "generalists," for they too require special training. Despite those changing patterns of medical practice, most medical schools have continued to give all of their students an identical medical education.

* Luginbuhl, W. H., and Andrews, E. C.: Curriculum innovation at Vermont; quiet revolution. MASSACHUSETTS PHYSICIAN, 26:846-848, (Oct.) 1967.

Each year vast amounts of new material are added to the curriculum, so that the student is overburdened with factual material, much of which is irrelevant to his future career in a specific field of medicine. Specialization is deferred, and requires years of residency training.

The innovations at the University of Vermont are an effort to provide a curriculum which is suitable for the training of family physicians, specialists and teacher-investigators at the medical-school level. The needs of those three groups are different, and in the new curriculum of the Vermont College of Medicine a student is permitted to pursue one of several different courses after completing courses in the basic and the clinical sciences. The new curriculum is composed of three parts: a Basic Science Core, a Clinical Core, and the Major Program.

During the entire freshman year and the fall of the sophomore year, the curriculum is restricted to the Basic Science Core. The purpose of this phase is to present to the students the body of knowledge common to all types of medical practice, but to avoid details which are relevant only to certain special fields of medicine. Whereas the old curriculum included 2,068 hours of classroom instruction in the basic sciences, the new curriculum requires only 1,500 hours. The time devoted to lectures, demonstrations and discussion has been reduced less than the hours required for laboratory work. As examples, the hours devoted to gross anatomy have been reduced from 313 to 147; to biochemistry from 208 to 173; to physiology from 238 to 153; to pathology from 383 to 258. During this period of study in the basic sciences, Saturday classes have been eliminated, and the student is also given at least two afternoons free each week during the first year. One marked departure from the conventional curriculum is an introduction to patients in comprehensive clinics, which are held throughout the first year.

The Clinical Science Core extends from January of the sophomore year through December of the junior year. During this period the student receives 12 weeks of instruction in medicine, 12 weeks of instruction in surgery and the surgical specialties, eight weeks in pediatrics, eight weeks in obstetrics and gynecology, and eight weeks in psychiatry. There is a luxury interval—a short summer vacation. Students in this phase of their medical education work in the hospitals and clinics, and instruction is based on the care of patients in these areas and in the classroom. Instruction includes only material considered essential for all physicians, and omits details which are considered necessary only for those entering a specialty.

The Major Program of the student's medical education covers the period from January of the junior year to graduation, in May of the following year. During this period, each student pursues a course of study which fits his individual interests and objectives. Students who wish to prepare for family practice pursue a different course of study from that pursued by those interested in surgery or one of the other specialties. Basic science courses related to the student's area of interest are covered in one quarter, and clinical courses are studied in the final three quarters of the senior year. It is pointed out that this new philosophy of medical education is not designed to supplant or duplicate any part of residency training, but rather to prepare the student more satisfactorily for subsequent specialty training in family practice, in a specialty, or for research or an academic career. Consideration is being given to permitting students to devote the entire period to the field of the basic sciences if they desire to do so.

In discussing the curriculum changes, the associate dean and the dean of the Vermont Medical School point out that solutions to problems in medical education are influenced by local conditions. The University of Vermont College of Medicine is a small school with a relatively small faculty. In the new curriculum the instruction in the basic sciences remains departmental. However an effort is made to offer related courses concurrently to permit some degree of integrated teaching.

Perhaps the most remarkable aspect of the curriculum changes at the University of Vermont College of Medicine has been that they have been the outcome of serious study and extensive discussion by the members of the faculty. "The definition of medical school objectives, the decision to institute core programs

and the design of the new courses," we are told, "all were performed by the faculty. The result of this faculty involvement has been widespread enthusiastic support."

Though the new course of study is a courageous effort to resolve some of the problems in the education of physicians, certain doubts arise concerning its merit. *First,* how many students in the junior year of medical school know with any degree of certainty what their choice of a lifetime career will be? *Second,* with the vast amount of knowledge that is added in the basic sciences each year, is it wise to reduce the time and effort devoted to that field of study? Surely it is even difficult for each department head to keep abreast of the contributions in his own specific field. *Third,* regardless of his choice of a career, is such a drastic reduction in hours devoted to the basic biologic sciences and a premature exposure to clinical medicine the best preparation that a medical student can be given for understanding and treating all of the ills to which mankind is heir? Surely a specialist should first be a well-trained physician!

SUICIDE, OUR TENTH PRINCIPAL CAUSE OF DEATH!

That there are nearly 25,000 deaths from suicide in the United States each year seems utterly incredible, but there are those who insist that that number represents only one-third to one-half of the real total. In addition to those who succeed in their efforts, there are many more who fail either by design or as a result of prompt and effective treatment. When it is realized that suicide ranks tenth among the causes of death in this country, and ranks second for college students and fourth for teen-agers, one has a better perspective of the problem. That there is a relatively high incidence among the elderly who are ill, lonely and despairing is perhaps somewhat easier to understand.

To a physician it is startling to learn that the suicide rate among physicians is eight times that of the general population, and that in the age group 25 to 39 years, 26 per cent of deaths are from suicide, compared with a rate of 9 per cent among white men in the general population who are in this age group. A perusal of the "Deaths" column in each issue of JAMA will confirm these sad statistics. The roles of alcohol and of drugs in the high suicide rate for physicians is well recognized.

In an excellent paper entitled "Recognition of Suicidal Risks,"* Leston L. Havens, an associate clinical professor at the Harvard University Medical School, points out that the vast majority of suicidal efforts arise as a consequence of despair and helplessness prompted by one or another of life's crises. The fact that many people fail to show or express despair openly, or that they respond to helplessness in a manner that makes their desperation quite unrecognizable can make the diagnosis of despair one of the most elusive and difficult problems in all of medicine. Whereas during the development of medicine excellent systematic methods and ancillary technics have evolved for the diagnosis of physical disease, the physician's training in psychiatry seldom equips him to cope with obscure human problems. The training in psychiatry is usually inadequate, the problems are mysterious, and the quantitative measurements and precise guidelines of general medicine are lacking. As a consequence, psychiatric problems, which should be approached in a systematic manner, with completeness and in detail, are given only a hasty and superficial consideration.

According to Havens, a psychological examination should be a part of *any* workup when diagnostic problems cannot be immediately resolved. It should be as much a part of the physician's available methods as inquiries about headache, constipation or change of appetite are part of his review of systems. He warns, however, that one must not rely on the psychological examination alone. Instead, physicians must compound their methods of inquiry. He points out that it is as important for the modern psychiatrist to know and understand the patient's family and social background as it is for an internist to know a patient's dietary history and the hazards of his environment. Emphasis is given to the admonition that physicians must listen more and talk less, and

* Havens, L. L.: Recognition of suicidal risks. NEW ENGLAND J. MED., 276:210-215, (Jan. 26) 1967.

that "listening with a third ear" may provide him information and insight of the greatest importance. Havens asserts that medicine is like detective work or safe-cracking; it requires fine fingers. It must be remembered, too, that most people seriously considering suicide are adept at shaping the interview—its content and emotional coloring, its inclusions and its exclusions.

The Harvard University psychiatrist asserts that an adequate psychiatric examination demands close observation of the patient—his speech, expression, dress, movements and all of the outer signs which may give a clue to his thinking and feeling. Throughout the interview one must listen for anything that does not fit, or for things that fit too well. In addition to examining the patient, the physician must also consider how the patient makes *him* feel. He must differentiate between how the personal responses reflect the patient's mood, and how, through contagious sadness or annoyance, those responses influence the physician's professional objectivity.

Havens states that the present methods of psychologic examination constitute a formidable armory, and that even the newest intern has more of them at his command than he generally realizes. By practice and by experience, skill can be acquired. The trouble, according to Havens, is that few physicians use those tools systematically and selfconsciously. They despair of acquiring psychiatric skills, and thus they neglect to utilize basic knowledge and technics.

Another contribution on the subject of depression by Henry Miller, a British psychiatrist, deserves the attention of practicing physicians, and it should contribute to a better understanding of this ubiquitous problem of suicidal risk.† He says that depressive illness is the most important cause of suicide, not just because of its frequency but because it is a disorder that is nearly always curable, and the disaster often avoidable.

Miller subdivides depression into exogenous and endogenous types—the former can reasonably be regarded as reactive to the environment, and the latter appears to have its origin within the patient himself. Though depression and states of anxiety are both affective disorders, though their outlines are indistinct, and though the two conditions may even coexist, he points out that the classical anxiety state is a disorder distinct from depression.

In differentiating between exogenous and endogenous depressions, Miller points out that there is a difference in symptomatology, and that they affect different types of patients. Exogenous or reactive depression affects the inadequate or unstable personality, and the history reveals a repeated pattern of escape from life's difficulties, with symptoms which are usually considered psychoneurotic. It is the patient with exogenous depression who usually shows rapid improvement upon removal of the environmental factor that precipitated the episode. In fact the entire depressive episode may have been designed to achieve some specific goal, such as the return of an errant husband.

Endogenous depression, according to Miller, usually occurs dramatically and in an unexpected way in an individual who is stable, energetic, extroverted and apparently successful. It may also occur in a patient with a depressive personality who has courageously carried on quite effectively, though unhappily, for most of his life—someone who is subdued in manner and gloomy in outlook. The frequency of a family history of depressive illness is sufficiently impressive to suggest a dominant inheritance of genetic susceptibility which may or may not manifest itself in overt illness. The roles of illness and of endoctrine disturbances in precipitating depressive illness are well recognized. Somewhat surprising is the assertion of Miller's that though endogenous depression may result from overwhelming emotional stress, it infrequently has that cause. "Depressive illness," he declares, "does not usually spring from grief, from which in most instances recovery is rapid."

According to Miller, endogenous depression is one of the commonest illnesses in medicine, and it is as near to a clinical entity as almost any disease in internal medicine. Since it causes so much chronic ill health and social insufficiency, and since it threatens life through an ever-present tendency toward suicide, its early recognition is of great importance. The fact that modern treatment is so extraordinarily successful also makes its recognition important.

† Miller, H.: Depression. BRITISH M. J., 1:257-262, (Feb. 4) 1967.

The cardinal feature of endogenous depression, the British psychiatrist asserts, is its totality. It involves the entire person—his mood, his thinking and his physical and mental activity. All are depressed. A distinctive pattern of disturbance of sleep is almost pathognomonic. In depressive insomnia, the patient falls asleep without difficulty, but awakens regularly in the early hours of the morning. The patient is described as feeling ill, looking ill and being ill. There is a loss of well-being, a loss of zest, of drive and of feeling. Many patients will acknowledge a loss of all normal feeling for their families. They are apathetic, they are easily exhausted, and their activities are curtailed. Miller quotes a colleague who coined the terse phrase "The neurotic gives up his work, while the depressive abandons his pleasures." In all but the mildest cases there is evidence of physiologic disturbance. Loss of appetite, loss of weight and loss of libido are said to be characteristic. Most patients with depression express feelings of inadequacy or self-reproach, saying that they are "letting everybody down" or that they are doing a poor job at work. The author emphasizes that depression often intensifies basic personality features. The paranoid individual has an accentuation of this tendency, and the commonest target is the spouse. A life-long hypochondriasis may become greatly exaggerated during a depressive illness. Though the clinical features are in some degree common to most cases of endogenous depression, it is emphasized that there are great variations in the patients' levels of activity, from that of the immobile and unresponsive patient gazing into space, to the agitated depressive, tortured by apprehension and despair.

Miller asserts that every patient with endogenous depression is a potential suicide. He says that most patients will answer quite unaffectedly if they are asked in a straightforward manner whether they have contemplated suicide. Evasions imply suicidal intention. It must be remembered that even when serious organic disease is present, a coincident endogenous depression may be a more serious immediate threat to the patient's life than a physical disorder, and it should have priority in treatment.

Concerning the treatment of endogenous depression, Miller states that four out of five cases respond to antidepressive drugs, and that in recent years he has needed to resort to electric treatment no more than three or four times a year, though he has had an average of 100 new cases. The indications for admission to the hospital are a palpable risk of suicide and severe agitation. He makes the statement: "Most of the depressives referred to formal psychiatrists today are either undiagnosed, half-treated with inadequate dosage, or imipramine-fast." He says, however, that this is not surprising, for the recognition of depression can be very difficult.

Surely the progress which has been made in recent years in the management of mental illness is one of the miracles of modern medicine. Since antidepressive drugs have proved so efficacious, it would seem feasible to use every conceivable channel of communication to urge the depressed to seek help. That would appear to be a public health project of real merit. Obviously there must be greater effort if the number of deaths from suicide is to be reduced. The interest and concern of a sympathetic physician are unquestionably necessary if the depressed are to communicate and express their despair.

CHILDREN LEARN WHAT THEY LIVE

If a child lives with criticism
He learns to condemn.
If a child lives with hostility
He learns to fight.
If a child lives with ridicule
He learns to be shy.
If a child lives with shame
He learns to feel guilty.
If a child lives with tolerance
He learns to be patient.
If a child lives with encouragement
He learns confidence.
If a child lives with praise
He learns to appreciate.
If a child lives with fairness
He learns justice.
If a child lives with security
He learns to have faith.
If a child lives with approval
He learns to like himself.
If a child lives with acceptance
and friendship
He learns to find love
in the world.

Dorothy Law Nolte

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Drug Letter

UNIVERSITY HOSPITALS

UNIVERSITY OF IOWA

IOWA CITY, IOWA

INDOMETHACIN

Indomethacin (Indocin®) has been available for prescription to patients for somewhat more than one year in the United States, and longer in other countries. In that short time, it has become a very popular drug, its gross sales probably having already exceeded several million dollars. Because of its extensive use, physicians are quite likely to encounter this drug, even though they may not themselves prescribe it.

Indomethacin is a non-steroid, anti-inflammatory drug, also possessing antipyretic and analgesic properties. It is an indole-3-acetic acid derivative. The medication is available only in the form of 25 mg. capsules. The dose varies according to the clinical situation. In treatment of chronic forms of arthritis, an initial dose of 25 mg. twice daily is advised, with increments of 25 mg. at approximately 4-5 day intervals being made until the maintenance dose of 100-150 mg. per day is reached. It should be given with meals; the bedtime dose should be given with a snack or milk.

Numerous reports of the use of indomethacin in the treatment of rheumatoid arthritis have appeared. Several of these have dealt with results of well-constructed double-blind studies, with comparison to placebo having been made, in which there is good evidence that indomethacin has significant anti-inflammatory activity in a majority of patients with rheumatoid arthritis. The experience that Dr. W. D. Paul and I have had with indomethacin during the past four years is in agreement with these reports. Substitution of placebo for indomethacin resulted in clear objective signs of exacerbation of joint inflammation, and improvement has appeared soon after indomethacin was given again. As with other drugs used in the treatment of rheumatoid arthritis, not all patients show a beneficial response to indomethacin. In one long-term controlled study, a beneficial response was observed in approximately 68 per cent of patients treated. Similar results have been reported by a number of investigators, but some studies have indicated less favorable experiences.

No renal, hepatic, cardiovascular, or hematopoietic complications definitely related to the use of indomethacin have been reported. The incidences of side effects such as headache, vertigo, lightheadedness, or minor disturbances of the sensorium have varied a good deal in the published reports, and have been related to the doses. If initial doses of 50 or 75 mg. daily are used, increasing to maintenance doses of 100-150 mg. daily, the incidence of these symptoms is approximately 20 percent. Abdominal distress at these dosages—primarily nausea or pain—occurs in approximately 10-15 per cent of cases. Peptic ulceration, complicated in a few instances by bleeding or perforation, has been reported in a small number of cases. The relationship between the use of indomethacin and peptic ulceration is difficult to assess, since ulcers have readily healed while the patients continued treatment with indomethacin, and also because it appears that the incidence of peptic ulcer in patients with rheumatoid arthritis is perhaps twice that in the general population. However, the close temporal relationship between the initiation of indomethacin therapy and the appearance of peptic ulcer in a few patients requires that this drug be considered potentially ulcerogenic in some people.

A few cases of dermatitis—usually a macular erythema—have been reported. In one instance, mild stomatitis also occurred.

A few cases of severe neurologic reactions have been reported. One investigator reported four patients with depression which promptly cleared when indomethacin was stopped. He also reported one patient who became comatose, one who had Jacksonian epilepsy, and another who had audiovisual hallucinations while taking indomethacin. Others have not reported such reactions.

Recently Dr. Charlotte Burns, of the U. of I. Department of Ophthalmology, has noted changes in electrical activity of the retina, in dark adaptation, and in visual acuity of several patients taking indomethacin—changes which are, in the main, reversible. Their relationship to the use of indomethacin has not yet been established, but her findings indicate that one must remain alert to this possibility.

Indomethacin has been reported beneficial in a higher percentage of patients with degenerative joint disease than in those with rheumatoid arthritis, and in response to somewhat smaller doses. Similar results have been obtained in patients with ankylosing spondylitis. The forms of arthritis resembling rheumatoid arthritis, such as Reiter's

Dr. Strottman is an assistant professor of internal medicine. This article appeared initially as an editorial in the December, 1966, issue of DRUG LETTER, a monthly intramural publication of the U. of I. College of Medicine. It is reprinted here at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the author.

syndrome and psoriatic arthritis also are said to respond favorably to indomethacin therapy.

Indomethacin treatment of acute gouty arthritis is highly effective, comparing favorably with colchicine or phenylbutazone therapy. Because of the relatively high doses used, however, the incidence of side effects is high and frequently necessitates discontinuing the drug.

Indomethacin is an anti-inflammatory drug of proved effectiveness in a significant number of patients. No serious toxic effects on the liver, kidney, and hematopoietic system have been reported. It is a new drug, however, and patients receiving it should be observed carefully for the possibility of previously unrecognized reactions.

M. P. STROTTMAN, M.D.

Obstetrics and Gynecology Department in Iowa City Shares in Testing Preventive for RH Disease

Rho GAM, an immune type of gamma globulin, administered by injection and expected to constitute a preventive for Rh disease, is undergoing clinical trials in the Department of Obstetrics and Gynecology at the U. of I. College of Medicine, along with a great many other places throughout the world.

It was developed by investigators at the Ortho Research Foundation, Raritan, New Jersey, and at Columbia-Presbyterian Medical Center, New York City. University Hospitals, Iowa City, is one of 42 medical centers where it is in experimental use. Dr. Charles A. White, an associate professor of obstetrics and gynecology, heads the project at the U. of I., and his associates are Dr. Clifford P. Goplerud, a professor of obstetrics and gynecology, Dr. Hal B. Richerson, an assistant professor of internal medicine, and Mr. Michael R. Liesch, chief blood-bank technician.

In studies of 825 patients treated at the various centers, the treatment was effective in all but two instances, and the failures were believed to have been caused by events that had taken place before the start of treatment, Dr. White said. In a control group of 537 untreated women, 41 showed antibody formation that could lead to the development of Rh disease in future pregnancies. Fifty-five of the treated women have subsequently given birth to babies without the Rh disease mechanism's being activated, but 12 of 33 untreated women have shown antibody formation during their next pregnancies.

Fifty-nine women have been treated at the U. of I. during the first year of the study, and though none of them have given birth since being treated, two are now pregnant again. Because of the special examination procedures that are necessary to the clinical trials, Dr. White said that only women who are patients at University Hospitals and who will deliver their babies there are included in the study.

It is anticipated that the substance will be made available for general use in the near future. An estimated 400,000 women in the United States each year might need the substance to prevent Rh disease, and according to Dr. White approximately 1,500 Iowa women might need it after delivery, and some 50 Iowa infants might subsequently be saved from death each year.

When an Rh-negative mother has an Rh-positive baby, minute amounts of the positive factor get into the mother's blood near or at the time of delivery. About 10 per cent of mothers thus become "sensitized" to the Rh-positive factor. Although the first such baby almost never has any problems caused by the Rh factor, when the woman becomes pregnant with her second Rh-positive baby, her sensitized system rapidly develops antibodies against the factor in the unborn (second) baby's blood. The hostile antibodies cross back to the unborn baby and destroy its red blood cells, the extent of the destruction determining the severity of the Rh disease. If a stillbirth does not result from the red blood cell destruction, the baby born with Rh disease has severe anemia, and may have other degenerative abnormalities throughout its body, including damage to the brain.

Dr. White emphasizes, however, that even though a husband is Rh-positive and his wife Rh-negative, there is no more than a 10 per cent chance, even with multiple pregnancies, that the mother will ever become sensitized to the Rh factor. Moreover, the hereditary make up of many Rh-positive males (about 55 per cent) is such as to cause only about half of the offspring of their Rh-negative wives to be Rh-positive. That further limits the frequency of difficulties.

Rh disease is found in only 3 to 5 per cent of Negroes, and is almost nonexistent in Orientals.

Called Rho GAM, the preventive immune globulin is refined from the plasmas of Rh-negative donors who have received challenge doses of Rh-positive red blood cells. The challenge dose causes the subjects to develop anti-Rh antibodies. Through plasmapheresis, the anti-Rh material is separated from the plasma and the blood cells and returned to the donor.

When an Rh-negative mother gives birth to an Rh-positive baby, she receives an injection of the substance within 72 hours. Only a small fraction of a fluid ounce can inactivate the disease-producing mechanism that might produce Rh antibodies to attack her next baby. For the woman who has had an infant with Rh disease, the substance has no value. For those who have not been sensitized before or during a previous birth, it provides protection if injected after each successive birth.

Cholera Is Again a Possibility

Cholera, an ancient communicable disease, once again poses a threat to the United States and other western countries because of rapid international travel. Details of the cholera threat to the western world are described in the September 16 issue of HOSPITALS, the journal of the American Hospital Association, by Eugene J. Gangarosa, M.D., of the U. S. Public Health Service's Communicable Disease Center in Atlanta.

Cholera has spread throughout Southeast and South Asia, penetrating as far west as Iraq in the Middle East since the pandemic of 1960 in Indonesia. Dr. Gangarosa considers the speed of international jet airliner travel a major factor in the spread and exposure of this disease. He warns that the five-day incubation period of cholera allows the international traveler to return home several days before the disease becomes clinically apparent.

Symptoms range from the most apparent, massive dehydration and collapse, to mild diarrhea that is not incapacitating in any way. In some cases, Dr. Gangarosa points out, a carrier of the disease may have no symptoms. "It is important at this time, particularly in cities that are focal points for international traffic, to subculture routinely for cholera vibrios stool specimens from patients with gastroenteritis who recently have visited cholera-infected areas," he said.

Although only two cases of cholera have been reported in the United States since 1911, travelers to infected areas are advised to receive vaccinations. "The standard vaccination procedure requires two inoculations, with an interval of at least seven days between the two," Dr. Gangarosa stated. Because the period of immunity is short and the degree of protection is limited, a booster dose should be obtained at six-month intervals as long as there is danger of infection, he explained.

Studies and experiments with different types of vaccine are being carried out in cholera-infected areas to find the vaccine that will provide the longest duration of protection. Studies are being conducted by the National Communicable Disease Center of the Public Health Service in East Pakistan, at the SEATO Cholera Research Laboratory, and by Japanese and Filipino investigators in the Philippine Islands.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 1001 Grand Avenue, West Des Moines, Iowa 50265.

Child Passengers in Automobiles Should Wear Seat Belts, Too

The AMA Committee on Medical Aspects of Automotive Safety, in cooperation with the U. S. Public Health Service campaign, urges all physicians to help cut the huge toll of death and injury to infants and small children from automobile accidents by warning parents of the dangers of riding in a moving automobile without using seat restraints.

Harold A. Fenner, Jr., M.D., AMA Committee chairman, points out that many parents allow children to stand with their faces practically touching the automobile windshield, when actually children should never even be allowed to sit in a moving automobile without restraints.

"Parents who ordinarily go to great extents to protect and care for their children here risk them unnecessarily to disfigurement, injury and death," Dr. Fenner said. "Physicians, especially pediatricians," he said, "often have an unusual opportunity to reach parents with this information."

The U. S. Public Health Service advises the use of presently available equipment, but urges the automotive industry to develop improved restraints, including shoulder straps.

The PHS seat belt campaign includes asking law enforcement officers and news media to include a report on seat belt usage in traffic accident stories, with the hope that publication of such information would further impress people with the crucial importance of wearing safety belts.

AMA Conference for Physicians on Use of Drugs by Youths

A two-day conference for physicians on the abuse of drugs by young people will be sponsored by the Council on Mental Health of the American Medical Association March 15 and 16 at the Drake Hotel, in Chicago.

The program will include discussions of the causes of drug abuse, the treatment and rehabilitation of drug dependent persons, deterrents to drug abuse and latest research findings in the field. A highlight of the conference will be a panel presentation on medical management of those who abuse drugs and become dependent on them.

"Drug Abuse in the Now Generation" is the theme of the meeting which will be the 14th annual conference held by the Council especially for members of state medical society mental health committees and representatives of state mental health departments. Other physicians interested in attending may write to the Department of Mental Health, American Medical Association, 535 North Dearborn St., Chicago 60610, for complete program details and registration information. There will be no registration fee.

The Mechanism of Heart Failure

Scientists of the U. S. Public Health Service's National Heart Institute report that the failing heart converts chemical energy to mechanical work at least as efficiently as does the normal heart. Previously, the fundamental biochemical defect in heart failure had been attributed by many to a defect in energy utilization. This defect is now thought to be either in the contractile proteins actin and myosin, which are the basic elements of contraction of the heart muscle fibril, or in the process of excitation-contraction coupling, by which the heart muscle is activated. In excitation-contraction coupling, calcium within the muscle is released and in turn causes a release of energy for the heart's contractions. This energy release causes the muscle to contract.

In order to determine whether there was any defect in energy transfer in the failing heart, Dr. Peter E. Pool and co-workers at National Heart Institute studied the direct conversion of chemical energy to mechanical work in right ventricular papillary muscles from normal cats and cats with experimental right ventricular failure.

Papillary muscles are the muscular eminences in the ventricles of the heart which, in combination with the atrioventricular tendons cause the cardiac valves to open and close. These muscles were used in this study because they are of a convenient size and also because all of their fibers are parallel, making it easy to measure the amount of work done in pulling in one direction.

The papillary muscles were treated to prevent the production of ATP from the metabolism of foodstuffs. The muscles were then stimulated to perform work by pulling against a load, and the amount of work was measured. They were then frozen and analyzed to determine the amount of ATP present. This gave a measurement of the amount of energy burned. The investigators found that failing heart muscles and normal heart muscles used the same amount of ATP energy per unit of work. This indicates that the failing heart converts chemical energy to mechanical work as efficiently as the normal heart.

Since the biochemical defect in heart failure is not in energy utilization, the National Heart Institute investigators postulate that the defect must be either in the contractile proteins or in excitation-contraction coupling.

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IMS ANNUAL MEETING

April 28-May 1

Hotels Savery and Fort Des Moines

Des Moines

These results were reported at the 40th Scientific Sessions of the American Heart Association in San Francisco by Drs. Peter E. Pool, Brian M. Chandler, James F. Spann, Edmund H. Sonnenblick and Eugene Braunwald of the Public Health Service's National Heart Institute.

Dr. Bean Helps Edit "Familiar Medical Quotations"

Dr. William B. Bean, professor and head of internal medicine at the U. of I., is a member of the editorial board for a new book, FAMILIAR MEDICAL QUOTATIONS, that will be published early in 1968 by Little, Brown and Company, Boston. Intended as a companion volume to BARTLETT'S FAMILIAR QUOTATIONS, it will contain nearly 8,000 statements made by physicians, teachers and investigators from the dawn of medical history to the present. It also is to contain quotations from lay writers dealing with physicians, disease and medical life. They will be arranged in chronological sequence under various subject categories, to provide historical perspective.

Simplified Diet Manual Study Guide

SIMPLIFIED DIET MANUAL STUDY GUIDE, just published by Iowa State University Press, Ames, is a workbook designed for use by food-service employees in health-care facilities, with help from a professional dietician or dietary consultant. It is intended to accompany the lessons in SIMPLIFIED DIET MANUAL, also an Iowa State University Press publication, and it contains information on the general diet and how it can be modified for individual patients' requirements.

Prepared by dietary consultants of the Iowa State Department of Health in cooperation with the Iowa Dietetic Association, the lessons are in the form of questions, with blank spaces to be filled in by the student. The included materials have been carefully selected to cover basic information on the general diet and its special modifications. The purpose of the guide is to familiarize the student with the SIMPLIFIED DIET MANUAL and teach him to use it.

Lesson areas include: The Four Basic Food Groups; General Diet; Diet for the Older Person and Full-Liquid Diet; Low-Residue Diet and Bland Diets 1 and 2; Soft Diet and Bland Diet 3; and Bland Diet 4 and Low-Fat Diet.

Diabetic Diet; Sodium Restricted Diets; Menu Planning Techniques; Menu Planning; Planning Modified Diets; and Review are some of the other topics. An answer section is included.

This spiral-bound manual is now available for use with the SIMPLIFIED DIET MANUAL. It may be purchased for $1.90 from booksellers, or from the Iowa State University Press, in Ames.

THE DOCTOR'S BUSINESS



Medical Personnel

LARRY E. LEAVERTON
Des Moines

When most physicians started in medical practice they probably did not realize that they would someday be fulfilling the role of a personnel manager and supervisor, besides meeting all of the other responsibilities of managing a practice.

In discussing the problems of business and professional offices someone said recently that his major problems were "people problems." This is true in many medical offices.

Now, more than ever before, it is necessary that physicians have the best personnel available. Because of the increased demands on their time, they want their assistants to assume more responsibility and to relieve them of as much administrative detail as possible.

Most medical practices are expanding. To handle the increased patient load physicians are hiring more assistants, more partnerships and groups are being formed, and larger and more efficient layouts are being designed.

We hear of problems from the doctors:

"We have too much turnover. Just as soon as we get a girl trained, she gets married, starts her family or moves to another locality." This is a common problem. We are in a mobile economy. Many people are changing jobs, new careers are opening, and husbands of medical assistants are being transferred. In many cases, however, truly careful initial selection could ease this problem and provide some stability for the doctor's staff. A desire for a higher family income and greater success in family planning are decreasing the turnover in many offices.

"Miss Doe is indispensible. I don't like the way she runs my office and the way she tries to run my life, but I couldn't get along without her." Nonsense! No one is indispensible. Perhaps the fault is your own, in not making her aware of your dissatisfaction. Give the proper attention to the business side of your practice. Select employees whose personalities will complement yours.

"I don't want my employees to know the financial aspects of my practice. They might discuss my affairs with their family and friends." If they can be trusted to keep the medical portion of your practice confidential, there should be no problem resulting from their knowledge regarding your finances. Your bookkeeper for instance, knows your gross income. It may be well for her to know the high costs of operating your office and your tax outlay.

"I just can't find good medical assistants." There are good medical assistants. We know thousands of them. Recruiting must be done through word-of-mouth, through your colleagues, through a carefully worded ad in your local newspaper, and through private employment agencies or the Iowa State Employment Service. If your locality has a chapter of the Iowa Association of Medical Assistants, it can come to your aid. There are many advantages to a career as a medical assistant. Qualified girls enjoy the variety and the challenge offered by the entire scope of the health profession.

The problems of the employees also deserve a hearing:

"We aren't appreciated." All employees need an occasional "thank you," or other words of appreciation for a job well done.

"We haven't been given an understanding of office policies, a job description, or a clear idea of what is expected of us." Put your policies in writing to prevent future misunderstandings.

"There is a complete lack of communication. The doctor is too busy to sit down and explain what he wants." Set aside time for office problems. The time will be well spent.

"Low pay." Some medical offices are still expecting above-average performance, but are offering average or below-average salaries. Inform yourself about salary levels in your locality. Pay above-average salaries, and expect top quality performance from your assistants.

Many problems can be prevented by proper selection of personnel, a written explanation of the personnel policies in your office, and a description of the position, listing duties and responsi-

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

bilities. Don't oversell the job. If you have a hectic, high-pressure office, don't describe it as a peaceful, easy place in which to work.

When hiring, check the applicant's background carefully. Getting in touch with her former employers is generally better than consulting her character references. It is surprising the number of doctors who do not do this. We know of cases where employees had been discharged for dishonesty, and subsequent employers did not bother to call for a reference.

It is important for all physicians to upgrade the quality of their personnel. You need assistants who can assume more responsibility, and who can get along well with your patients, with your other employees, and with you who are directing them. Encourage your employees to improve their skills through attending meetings, taking courses and reading books. If they dislike people, or if they are impatient or dislike serving the public they are in the wrong job. An employee who is aloof or cranky with patients has no place in your office. You will be delegating more responsibilities to them. Be sure they are "heavy" enough for this responsibility. Define the duties they will be performing. Will they be handling the phone, receiving patients, bookkeeping, typing, completing insurance forms, doing routine filing or assisting with examinations? Each job requires different skills and talents.

There is a lot said and written about the doctor's "image." The success he has in selecting and training the personnel in his office is an important part of that image.

Arteriosclerosis May Cause Both Gains and Losses in Auditory Acuity

Hardening of the arteries may contribute to hearing loss in the aged, but it also may increase the ears' sensitivity to certain sounds, a University of Iowa researcher has found. Richard J. Voots, Ph.D., a research assistant professor of otolaryngology has found that hardening of the arteries probably contributes significantly to the functional degeneration of the auditory nerve. Quite unexpectedly, however, he also found that the disease seems to add to the efficiency of the mechanical parts of the ear at pitches of 2,000 cycles per second and above. Most speech sounds fall between 400 and 3,000 cycles.

"This apparent dual effect of the disease—damage to the nerve and increased efficiency of the mechanical parts—suggests that simple, pure-tone tests for hearing loss may not accurately measure the true extent of auditory system damage," Dr. Voots said. "Ordinary tests of overall hearing sensitivity would detect only the sum of the two effects, a value which would be less than that caused by the more significant effect alone. Increased mechanical sensitivity at the higher pitches would tend to counteract losses associated with nerve degeneration, making total measured losses appear less important than they actually are."

He said that because the study was based on a small number of experimental animals, more research is necessary to verify the findings. A colleague in the study is Dr. Richard Lawrence, a resident in otolaryngolgy at the U. of I.

Dr. Voots said the progressive loss of hearing sensitivity associated with advancing age is important because it probably is related to the adverse changes in personality and social attitudes which often occur in older persons. "It long has been suspected that hardening of the arteries, a disease which appears to be almost universally associated with aging to some degree, contributes to hearing loss, but there has been little substantive evidence of such a link," he said.

In the research, Dr. Voots induced hardening of the arteries in rabbits by feeding them a high cholesterol diet for six months. Electrical activity of the ears of the rabbits was recorded by attaching a connection to the inner ear. A click sound, used to test the function of the auditory nerve, indicated that the nerve response of the diseased rabbits was completely missing or was much weaker than in rabbits which had not been fed the high cholesterol diet. Dr. Voots said the degeneration of auditory nerve function in the diseased animals probably results from interference with the blood supply to the sensitive cells and nerve fibers in the inner ear.

In another test, the stimulus consisted of pure tones in a wide range of pitches and loudnesses roughly equivalent to those used in hearing tests for human beings. Animal responses to this test reveal the function of the mechanical parts of the ear as they move to convey sound waves to the point in the inner ear where the nerve responses are generated.

Little difference in mechanical function was noted in responses of diseased and non-diseased rabbits to lower-pitch sounds. But the cholesterol-fed rabbits showed higher sensitivities to sounds of 2,000 cycles and above. "This seemed to indicate that changes in the mechanical properties of the ear system caused by hardening of the arteries actually results in a more efficient transfer of sound energy from the air to the inner ear at high pitches," Dr. Voots said. He presented the results of the research at a recent meeting of the Acoustical Society of America in Miami Beach.

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IMS ANNUAL MEETING

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Annual Refresher Course for GP's In Iowa City

The U. of I. College of Medicine and the Iowa Chapter of the American Academy of General Practice will present their Annual Refresher Course for GP's in Iowa City, February 13-16. Registration for AAGP members is $15; for non-member physicians it is $40, or $25 for a single day. The program is accredited for 21 hours by the AAGP.

Parking permits are required, and are available on request. The Director of Postgraduate Medical Studies will assist physicians in arranging for lodging, if they request such help.

Tuesday, February 13

9:00 a.m. "Implications of the Regional Heart, Cancer and Stroke Program in Iowa"—W. Krehl, M.D.

9:20 a.m. "Effects of New Drugs Upon Serum Lipids: Mechanisms and Results"—W. Connor, M.D.

9:40 a.m. "New Concepts: Evaluation and Management of Angina Pectoris"—D. Warkentin, M.D.

10:00 a.m. URINARY TRACT INFECTIONS IN PREGNANCY: I. Smith, M.D. (moderator), D. Culp, M.D., R. Freeman, M.D., and C. White, M.D.

SPECIAL GROUP CONFERENCES

11:00 a.m. DERMATOLOGY: "Treatment of Warts From Sole to Scalp"—C. E. Radcliffe, M.D.
ANESTHESIOLOGY: "Preoperative Pulmonary Assessment"—J. Moyers, M.D.

11:50 a.m. PSYCHIATRY: "The Hyperactive Child"—H. Comly, M.D.
ORTHOPEDICS: "Hip Problems in Children"—M. Bonfiglio, M.D.
NEUROLOGY: "New Concepts in Meningitis"—A. Sahs, M.D.

2:00 p.m. "Practical Applications of Immunoglobulin Studies"—H. Richerson, M.D.

2:30 p.m. "Motor Disorders of the Esophagus"—J. Christensen, M.D.

2:40 p.m. "The Cold Painful Hand"—F. Abboud, M.D.

3:15 p.m. "Office Management of Anxiety"—R. Penningroth, M.D.

3:40 p.m. "Assays of Insulin and Growth Hormone and Their Clinical Significance"—N. Samaan, M.D.

4:00 p.m. "Gout: Practical Problems in Diagnosis and Management"—M. Strottman, M.D.

Wednesday, February 14

9:10 a.m. "Blood Gas Analysis (Astrup) in the Newly Born Infant"—G. L. Baker, M.D.

9:30 a.m. "Intestinal Obstruction in the Neonate"—R. T. Soper, M.D.

9:50 a.m. "Newer Concepts of Bilirubin Metabolism in the Neonate"—D. L. Silber, M.D.

10:10 a.m. "Infant Feeding, 1968"—S. J. Fomon, M.D.

SPECIAL GROUP CONFERENCES

11:00 a.m. PSYCHIATRY: "Counseling Parents on Adolescent Turmoil"—R. Jenkins, M.D.
OTOLARYNGOLOGY: "Immediate Management of Soft and Hard Tissue Injuries to Head and Neck"—J. Leonard, M.D.
ANESTHESIOLOGY: "Treatment of Respiratory Insufficiency"—A. Boutros, M.D.

11:50 a.m. RECENT DEVELOPMENTS IN PSYCHOPHARMACOLOGY: P. Huston, M.D. (chairman), R. Finn, M.D., R. Noyes, M.D., and J. Clancy, M.D.
ORTHOPEDICS: "Treatment of the Painful Hip"—R. Johnston, M.D.
NEUROLOGY: "Peripheral Neuropathy in General Medicine"—M. VanAllen, M.D.

2:00 p.m. "Use of Ampicillin, Kanamycin and Colymycin in Pediatrics"—D. Dunphy, M.D.

2:20 p.m. "Use of Anticonvulsant Drugs in Treatment of Children"—W. E. Bell, M.D.

2:40 p.m. "Thrombocytopenia in Childhood"—A. D. Lascari, M.D.

3:20 p.m. "Cardiac Murmurs Picked Up at Time of Preschool Examination"—R. E. Durnin, M.D.

3:40 p.m. "Roentgenologic Diagnosis of Pulmonary Disease in Children"—A. C. Selke, M.D.

4:00 p.m. "The Hand in Pediatric Differential Diagnosis"—C. F. Johnson, M.D.

Thursday, February 15

9:00 a.m. "The Place of Surgical Therapy in Thyroid Disease"—R. Liechty, M.D.

9:20 a.m. "Management of the Unstable Chest Wall"—J. Ehrenhaft, M.D.

9:40 a.m. "Progress Report: Chronic Renal Dialysis"—R. Lawton, M.D.

10:00 a.m. "Ruptured Aortic Aneurysm"—M. Lawrence, M.D.

10:20 a.m. THE GENERAL PRACTITIONER AND THE 1969-71 IOWA CANCER MORBIDITY SURVEY: L. E. Rosebrook, M.D., and J. A. Buckwalter, M.D.

SPECIAL GROUP CONFERENCES

11:00 a.m. DERMATOLOGY: "Psoriasis—Therapeutic Achievements and Frustrations"—R. M. Caplan, M.D.
PSYCHIATRY: "Outpatient Management of Schizophrenia"—G. Tourney, M.D.
OPHTHALMOLOGY: "Blurred Vision in the Elderly Patient"—R. Watzke, M.D.
11:50 a.m. NEUROLOGY: "Face Pain"—R. Calkins, M.D.
OTOLARYNGOLOGY: "Office Planning of Facial Plastic Surgery"—L. Bernstein, M.D., B.D.S.
DERMATOLOGY: "Management of Eczema"—W. C. Fritsch, M.D.
2:00 p.m. "The Surgical Treatment of Obesity"—E. Mason, M.D.
2:20 p.m. "Low Back Pain: The Neurosurgical Evaluation"—C. J. Graf, M.D.
2:40 p.m. NEWER APPROACHES TO PULMONARY EMBOLISM: E. Green, M.D., F. L. Benoit, M.D., S. Cornell, M.D., and K. Walgren, M.D.
3:30 p.m. "Technics and Pitfalls in Skin Grafting"—D. Furnas, M.D.
3:50 p.m. "Rehabilitation of the Stroke Patient"—M. Schnell, M.D.
6:00 p.m. SOCIAL HOUR AND DINNER, University Athletic Club. Speaker: Congressman John Kyl

Friday, February 16

9:00 a.m. "Pelvic Pain—A Diagnostic Dilemma"—J. P. Jacobs, M.D.
9:20 a.m. "What Does Pelvic Inflammatory Disease Mean to You?"—W. R. Anderson, M.D.
9:40 a.m. "White Lesions of the Vulva"—L. W. VanVoorhis, M.D.
10:00 a.m. "Medical Versus Surgical Management of Endometriosis"—W. C. Keettel, M.D.
10:20 a.m. "Recent Advances in Contraceptive Methods"—L. R. Hughes, M.D.
11:00 a.m. "Plans for the University Health Complex"—R. C. Hardin, M.D.
2:00 p.m. "Diagnosis and Management of Trophoblastic Disease"—C. P. Goplerud, M.D.
2:20 p.m. "Clinical Evaluation of Intrapartum Fetal Distress"—M. E. Yannone, M.D.
2:40 p.m. "Perinatal Mortality: How Can It Be Reduced?"—C. A. White, M.D.
3:20 p.m. PROBLEMS OF ILLEGITIMACY: I. Reiss, Ph.D. (professor of sociology and anthropology), L. R. Hughes, M.D., and A. S. Norris, M.D.

The City of Washington's Experience With the Alcoholic

For years, Washington, D. C. treated chronic alcoholics much the same way other cities did—it threw them in jail. As recently as 1964, two-thirds of more than 28,000 persons committed to the District's Department of Corrections had been arrested for intoxication.

In 1966, however, the U. S. Court of Appeals for the District ruled that an alcoholic should be treated as a sick person rather than as a criminal. It was what amateur court-watchers call a "landmark" decision.

Suddenly, the Department of Public Health was faced with the treatment of hundreds of court-committed alcoholics for which it had no facilities. The outpatient clinic was quickly inundated with patients. Its established treatment program had to be curtailed in order to process the court cases. Clinic hours were extended . . . it even became necessary to discontinue admitting voluntary patients. The empty beds in the city's chronic disease and tuberculosis hospital were used for alcoholic patients. Court-committed alcoholics could not be placed in a meaningful treatment program on an outpatient basis because their numbers simply overwhelmed the clinic staff. The clinic could not even keep contact with many patients long enough to complete the required diagnosis and classification report. Two 100-bed dormitories at the D. C. workhouse were turned over to the health department as diagnosis and classification facilities. But once diagnosed, the patients could not be treated except in the impossibly overcrowded outpatient clinic.

By that time, the Court of General Sessions was intensely displeased with the District government's arrangements for handling alcoholics, and health department officials were subpoenaed to give testimony on the adequacy of available treatment facilities. Amid a growing controversy, the health department found itself squarely in the middle. The department had been given full responsibility for the care and treatment of alcoholics, but the assignment was given without the benefit of sufficient funds for adequate facilities necessary to fulfill its responsibility.

Several things were done rapidly to improve the situation. First, there was a need to increase the staffs of the rehabilitation clinic and a new mental health center. This was done with the aid of a federal grant from the National Institute of Mental Health. Second, community housing was needed for skid row alcoholics who could benefit from outpatient treatment. One small "halfway" house has been opened, but the health department is still looking for a suitable larger building. Third, a facility was needed for patients who require extended care. An emergency budget was asked of Congress, 118 new staff positions were created, and a women's reformatory was converted into a rehabilitation center. Within six weeks, the authorized capacity of 450 was reached and has been maintained since.

A bill has been introduced in Congress which, if enacted would authorize the D. C. health department to expand these activities considerably.

Other communities should prepare to meet this problem in a similar way, according to an editorial in the December 4, 1967, issue of JAMA. The District of Columbia, said the editorial, has been the reluctant site of "the first beginnings of an intelligent approach to the indigent inebriate problem. Other communities must learn from it, and must act before the chaotic crisis that developed in the District of Columbia is similarly forced upon them. It is not a matter of just public health concern, but of total community commitment."



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Recommended intake: Adults, 1 capsule daily, for the treatment of vitamin deficiencies. Supplied in decorative "reminder" jars of 30 and 100; bottles of 500.

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STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Mumps in Iowa—1967

This past year has been a year of high incidence for mumps in Iowa. By the end of October, 4,556 cases had been reported. Occurrence by month is shown in the following table:

CASES BY MONTH, 1967

January	198	June	379
February	496	July	131
March	640	August	110
April	693	September	155
May	932	October	822

The gradual build-up in numbers of cases to a high point in May is obvious. The drop-off in July, August and September can be explained either by poor reporting or by a reduction of spread when schools were dismissed for summer vacation. The high incidence in October may have been the result of a greater opportunity for infection after school sessions resumed.

Total numbers of mumps cases by year for the past 10 years are tabulated below:

CASES BY YEAR, 1957-1966

1957	4,197	1962	2,186
1958	6,196	1963	3,989
1959	2,049	1964	9,063
1960	4,474	1965	3,871
1961	4,621	1966	3,397

This table indicates that Iowa had two years of high incidence in the past decade, 1958 and 1964. The cases reported through October were more numerous than those in seven of the past 10 years. Thus it seems certain that 1967 will have been a near record-breaking year.

Early in 1968, a mumps vaccine is expected to be released for general use. Once administration of that vaccine begins, we shall probably note a gradual reducton in the numbers of mumps cases, but if our experience parallels that with the measles vaccine, no great reduction will be apparent for several years. Measles vaccine has been in fairly general use for about four years, yet the incidence of measles continued to run over 5,000 cases per year until 1967. This past year, measles vaccine was intensively promoted, county-wide clinics were held, and as of the end of October there had been no more than 14 per cent of the number of cases that had occurred during the comparable months of 1966. Thus, apparently, only a concerted attack on a disease yields a really dramatic reduction in incidence, even if an effective vaccine is in fairly widespread use. The backlog of susceptibles seems to remain large enough to postpone a reduction in incidence for several years, unless a special effort is made to round up and immunize all potential hosts.

Vital Statistics Records Revised . . .

Revised forms for recording births, deaths and fetal deaths, developed by the Iowa State Department of Health, are being introduced as of January 1, 1968. Major revisions of vital records are undertaken approximately every 10 years to reflect the revised recommendations of the United States Public Health Service regarding the content of vital records. These recommendations to the states, known as the "standard certificates," along with the international classification of diseases, are the two most important instruments for achieving the nationwide comparability and consistency that are essential in the interpretation of vital statistics data.

Along with the introduction of revised vital records, the Iowa State Department of Health will release special handbooks giving complete instructions on the preparation and filing of birth, death and fetal-death certificates. These handbooks have been prepared for use by hospital personnel, attending physicians, medical examiners, and funeral directors in the completing of certificates.

Distribution of the revised vital record certificates and handbooks were to be completed during December. *It is imperative that only the new certificate forms be used on and after January 1, 1968.*

Included in new information never before collected will be questions relating to the education of the parents, date of the mother's last live birth or last fetal death, the month of pregnancy in which a mother began prenatal care, and the number of her prenatal visits.

Reminder on Drug Sample Disposal

IMS members are encouraged to destroy as thoroughly as possible any drug samples which they do not wish to retain for use. Thorough disposal of such samples will eliminate the likelihood of their being retrieved by persons in whose hands there could be an element of danger. It is recognized that in many instances these samples are received on an unsolicited basis and discarding them becomes time-consuming; however, it is believed that their disposal should be thorough.

A Note From the Commissioner

Janus, the Roman god for whom our first month is named, looked both backward and forward. If I steal a page from Janus' book, I can see many accomplishments of ours during the past year. Local boards of health are established in most counties; the people of the state are being served well by dedicated health personnel; we have had no major disease outbreaks or natural disasters, and we have come a long way toward eradicating measles from Iowa. During the year we have been joined by many new workers for health, particularly additional school nurses.

If I look ahead, I see another year of myriad problems, crises and uncompleted tasks. Overshadowing all these I see the united determination and dedication of all of you.

All members of the Department's staff join me in thanking you for your past efforts. We promise our utmost cooperation to make 1968 a Happy and Successful New Year.

ARTHUR P. LONG, M.D., Dr.P.H.

Glass Chillers

Glue sniffing set a bad precedent for teenagers in their search for new thrills. The younger generation is now experimenting with the inhalation of some rather bizzare substances. The latest is the inhalation of commercial products, known as "glass chillers." At least seven deaths in the United States have been attributed to the misuse of these aerosol substances. Balloons, plastic or paper bags, or other inflatable receptacles have been filled with the gaseous material, and the contents have then been inhaled for a possible narcotic effect. One teenager unintentionally committed suicide by releasing the spray directly into his mouth, freezing his larynx and closing the airway.

These "glass chillers" contain no oxygen, and if inhalation is continued long enough, asphyxia occurs. Since these experiments are often carried on secretly, no one usually is at hand to provide resuscitation.

The widely-publicized ability of high helium and other artificial atmospheres to alter vocal tone had led teenage experimenters to seek the same effect by inhaling various aerosol products.

The Iowa State Department of Health would appreciate receiving information from physicians who encounter the results of such foolhardy experiments. Doctors are encouraged to point out the extreme hazards of thrill-seeking in such dangerous areas.

Morbidity Report for Month of November, 1967

Diseases	1967 Nov.	1967 Oct.	1966 Nov.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	513	518	644	Entire state
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	14	11	16	Madison, Scott, Winneshiek
Whooping cough	16	8	4	Lucas, Polk, Scott
Brucellosis	4	3	3	Cherokee, Dubuque, Scott, Woodbury
Chickenpox	441	211	554	Entire state
Meningococcal meningitis	3	1	0	Dubuque, Polk, Scott
Mumps	1255	575	116	Entire state
Poliomyelitis	0	0	0	
Infectious hepatitis	29	19	39	Dubuque, Polk, Scott, Wright
Rabies in animals	10	8	7	Entire state
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	15	6	20	Entire state
Syphilis	46	63	98	Entire state
Gonorrhea	306	364	246	Entire state
Histoplasmosis	6	3	4	For the state
Food intoxication	0	0	0	
Meningitis (type unspec.)	3	3	2	Pottawattamie, Scott, Woodbury
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	2	
Salmonellosis	6	11	3	Black Hawk, Monroe, Scott, Wapello
Tetanus	1	0	0	Mitchell
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	1	3	
H. influenzal meningitis	0	2	1	
Amebiasis	1	0	1	Pottawattamie
Shigellosis	5	5	6	For the state
Influenza	0	0	0	


in moderate hypertension and
poorly controlled mild hypertension
(when diuretics or sedatives are inadequate, for example)

When your patients expect a lot...

like relief from hypertensive symptoms
(headache, fatigue, nervousness, palpitation or insomnia, for example)

like an up-to-date, once-a-day dosage schedule
(a schedule not unlike timed-release medication, for example)

like a daily dose of medication for peanuts
(at 10¢ a tablet, for example)

like generally well-tolerated therapy
(as described in the package insert, for example)

...give them a little
(one tablet daily)

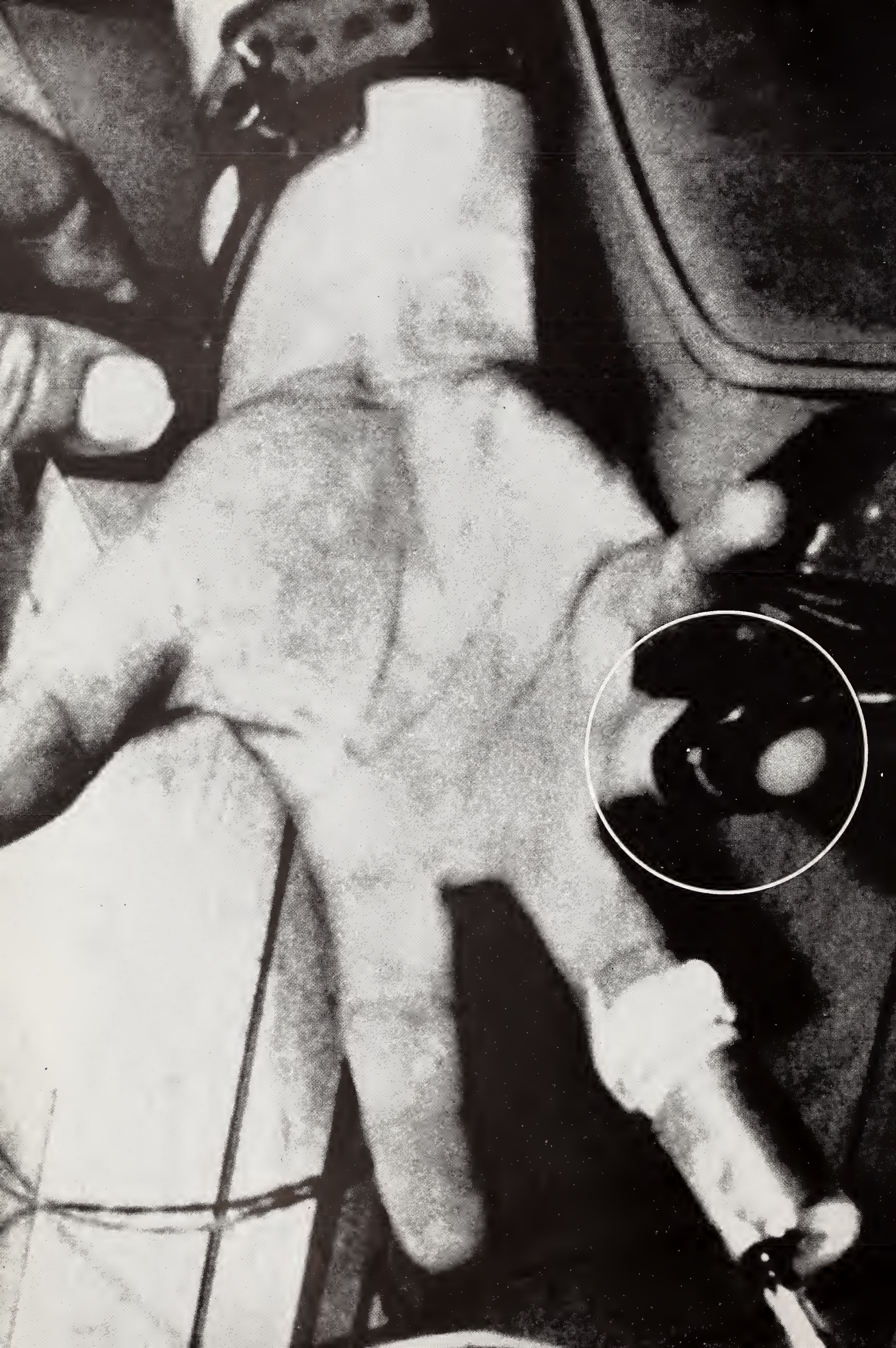
Regroton®

chlorthalidone 50 mg., reserpine 0.25 mg.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Regroton should be used in pregnant patients or in women of childbearing potential only when, in the judgment of a physician, its use is deemed essential to the welfare of the patients; adverse reactions (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Regroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue Regroton therapy two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Regroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B) 46-600-B
For details, see complete Prescribing Information.

Geigy Pharmaceuticals, Division of
Geigy Chemical Corporation, Ardsley, N.Y.

Geigy



WHAT DOES GALVANIC SKIN RESISTANCE DEMONSTRATE ABOUT THE EFFECT OF VALIUM (diazepam)?

Galvanic skin resistance... one measure of the Valium (diazepam) effect in reducing the somatic response to acute stress[1,2]

The subjective value of Valium (diazepam) has been proved by many clinical and empirical evaluations. Now, also objective criteria such as used in other areas of scientific research have demonstrated the effectiveness of Valium (diazepam) in reducing certain somatic responses to acute stress.

Devised as a research tool in psychosomatic medicine, this interesting method records respiratory excursions, galvanic skin resistance, cardiac activity and finger pulse volume as physical responses to stress. These autonomic nervous system responses to a standardized stressor—a film dealing with life-threatening incidents—are continuously monitored on the polygraph.

This gives a graphic representation of changes which the body may undergo in reacting to stress. The application of modern statistical analysis to these graphs provides a yardstick by which the calming effect of Valium (diazepam) can be measured quantitatively.

Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Infants, patients with a history of convulsive disorders, glaucoma or known hypersensitivity to drug.

Warning: Not of value in the treatment of psychotic patients, and should not be employed in lieu of appropriate treatment.

Precautions: Limit dosage to smallest effective amount in elderly or debilitated patients (not more than 1 mg, one or two times daily initially) to preclude ataxia or oversedation, increasing gradually as needed or tolerated. As is true of all CNS-acting drugs, until correct maintenance dosage is established, advise patients against possibly hazardous procedures requiring complete mental alertness or physical coordination. Driving during therapy not recommended. In general, concurrent use with other psychotropic agents is not recommended. If such combination therapy is used, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), such as phenothiazines, barbiturates, MAO inhibitors and other antidepressants. Advise patients against simultaneous ingestion of alcohol or other CNS depressants. Safe use in pregnancy not established. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Observe usual precautions in impaired renal or hepatic function. Periodic blood counts and liver function tests advisable in long-term use. Cease therapy gradually.

Side Effects: Side effects (usually dose-related) are fatigue, drowsiness and ataxia. Also reported: mild nausea, dizziness, blurred vision, diplopia, headache, incontinence, slurred speech, tremor and skin rash; paradoxical reactions (excitement, depression, stimulation, sleep disturbances, acute hyperexcited states, hallucinations); changes in EEG patterns during and after drug treatment. Abrupt cessation after prolonged overdosage may produce withdrawal symptoms (convulsions, tremor, abdominal and muscle cramps, vomiting, sweating) similar to those seen with barbiturates, meprobamate and chlordiazepoxide HCl.

Dosage—*Adults:* Mild to moderate psychoneurotic reactions, 2 to 5 mg b.i.d. or t.i.d.; severe psychoneurotic reactions, 5 to 10 mg t.i.d. or q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; muscle spasm with cerebral palsy or athetosis, 2 to 10 mg t.i.d. or q.i.d. *Geriatric patients:* 1 or 2 mg/day initially, increase gradually as needed and tolerated. (See *Precautions.*)

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 50 and 500.

Roche Laboratories, Division of Hoffmann-La Roche Inc. Nutley, N.J. 07110

References: **1.** Selesnick, S. T., and Clemens, T. L.: From research film "Motion Picture Films in Psychosomatic Research," available from Roche Laboratories. **2.** Clemens, T. L., and Selesnick, S. T.: *Dis. Nerv. System, 28*:98, 1967.

VALIUM® (diazepam) Roche®

useful for somatic symptoms of psychic tension

Iowa Association of Medical Assistants

Inventory, 1967

By now, your 1968 RESOLUTIONS are in effect . . . or they have been broken. If the latter is true perhaps an inventory of "YOU" might help mend the break and add fun and value to your professional and personal actions.

Here is a check list for you to consider:

a. Study to do every bit of your work better than it has been done or as efficiently as it might have been done. . . . Ask yourself "Is there a simpler or faster way of doing this job that will save time and money?" . . . If you think there is, talk it over with your employer.

b. Remember that you represent your office. . . . Your job involves dealing with patients and the public, either personally, or by 'phone or by mail. In your contacts with them YOU are the doctor's office. They gain either their first or at least a lasting impression from your attitude, your responses to their requests, your loyalty, your desire to please, and your pride in your office and in the medical profession. No matter what the task, you can be an enthusiastic salesman.

c. Keep a constant vigil for safety. . . . In every office, there are fire, accident and health hazards. Make safety one of your first concerns.

d. Develop a strong "we" spirit in your office. . . . If your physician has more than one employee, develop the "WE" spirit for the benefit of the entire office as well as for the benefit of the patient-public. Antagonisms between employees can be felt by the patient. If things are not *right,* don't criticize; have a conference.

e. Maintain a helpful attitude. . . . Ask yourself each day . . . "What could I do today to be more helpful. It isn't always the skill with which you do your job, but the attitude you adopt in doing it. Just try-on some other people's daily problems "for size." You can stretch your mind and develop your judgment while preparing for bigger jobs ahead.

f. Be sure you communicate. . . . It is important that your employer be kept posted at all times on what you are doing or what you plan to do. And ask questions if you are not quite sure what is expected of you. Good COMMUNICATIONS, both up and down, keep everyone "on the beam."

g. Give credit where credit is due. . . . We like people who express appreciation for our efforts. There is no better way to win friends and make a valuable contribution to the harmony of the office, than to thank others for their shares of the work, or to praise them for starting jobs promptly, and doing them quickly and well.

h. Read . . . and keep on reading. Whatever your job is, there are books that can help you do it better. Buy, rent, or borrow those books, and read them. There are trade magazines. Subscribe to the best. Read them regularly. Your job improves as you improve.

i. Do a full day's work every day. Set a good example by being on time every morning. Leave home *early enough* to be sure you are at your desk on time, especially in bad weather, and arrive safely. Avoid the bad example of being the first to leave at quitting time, or having your coat on five minutes early. . . . Take pride in delivering a full day's work each day.

j. Welcome change. Welcome a new plan or project, and cooperate enthusiastically. New plans and projects are necessary to progress . . . for business and for yourself.

k. Look . . . for shortcuts to efficiency. Perhaps obsolete routines or records are still being retained that take too much time and energy and add to the mountain of paperwork. Ask yourself, "Is this part of the job?" or "Is this routine necessary?" If you have doubts, talk it over, search for a solution, and then follow through.

l. Apply a "give yourself away" action. Finally . . . this last suggestion for mending your broken resolutions so the seams will hardly show. "Give yourself away" in the little things you do each day. Lend a helping hand; pay a compliment; give praise; reach out a helping hand to the stranger! Being helpful ought to need no reward, but if you insist on receiving a "quid" for every "quo," be assured that *you can't* possibly "give yourself away" without getting back more than you give.

Don't close the file on your inventory; review it now and then. It is always refreshing to improve!

—Marian Little

(More AAMA News on page 79)

AAMA Annual Meeting

Mrs. Margaret Swank, Newark, Ohio, was installed as president of the American Association of Medical Assistants at its 11th annual convention, Oct. 11-15, in Los Angeles. A certified medical assistant, Mrs. Swank has been employed by Carl L. Petersilge, M.D., a Newark pediatrician, for the past 15 years. Other officers elected for 1967-68 were: Mildred Crawford, president-elect, San Antonio, Texas; Ruth Dize, vice-president, Norfolk, Virginia; Pauline Hunter, secretary-treasurer, Phoenix, Arizona; Betty Lou Willey, speaker, Port Huron, Michigan; and Juanita Ainsworth, vice-speaker, Dallas, Texas.

In a luncheon address during the convention, Milford O. Rouse, M.D., of Dallas, president of the American Medical Association, said the preservation and improvement of the physician-patient relationship will depend, to an increasing extent, upon the role the medical assistant plays in the doctor's office.

Dr. Rouse told the more than 900 medical assistants attending the convention that medicine has been accused of changing and destroying this MD-patient relationship, letting medical care become too automated and too impersonal and using the increasing demand for medicare service as an excuse. He urged both physicians and medical assistants to see that medical care remains personal care.

Two pharmaceutical companies—Merck, Sharpe and Dohme, and Lederle Laboratories—announced renewed support of AAMA's continuing education program by each contributing $5,000. Since 1962, Merck has supported the AAMA's certification program, designed to establish professional standards and goals for medical assistants. For the second year, Lederle has contributed to the approval program which will establish guidelines for approving schools offering medical-assistant training.

1967-1968 Issue of Booklet on Immunization for Foreign Travel

The USPHS National Communicable Disease Center, rather tardily, has announced the issuance of its 1967-1968 edition of the booklet IMMUNIZATION INFORMATION FOR INTERNATIONAL TRAVEL, and has declared that all previous editions, and the regulations contained therein, were superseded as of July, 1967. Those preceding booklets and the supplements to them should be destroyed.

Single copies of the 1967-1968 booklet are available from Arthur S. Osborne, medical director, National Communicable Disease Center, Atlanta 30333.

The revisions contained in it include (1) information concerning smallpox vaccinations or revaccinations performed on or after January 1, 1967, which must be recorded on the revised International Certificate of Vaccination or Revaccination against Smallpox approved by the 18th World Health Assembly; (2) an up-to-date map of the Yellow Fever Receptive Areas in the United States, Section 8; (3) current information on immunization requirements for entrance to other countries, Section 5; (4) changes in recommendations concerning typhoid, tetanus, plague and diphtheria immunizations, Section 2; and (5) the change in the smallpox vaccination requirement for persons traveling between the United States and Mexico.

Effective Protection for Pedestrians and Cyclists

Pedestrians and cyclists can help protect themselves from injury at night by wearing materials that reflect auto headlight beams, the U. S. Public Health Service said.

Jerome H. Svore, director of the National Center for Urban and Industrial Health in Cincinnati, said that these types of material and devices, called retro-reflective, can be attached to clothing or accessories, carried as tags, or applied to motorcycles or bicycles.

"A beam of light bounced off this material returns to the source of light with considerable brilliance," Svore said. "In daylight the material is, at most, inconspicuous. The material is now used in various types of highway signs and markers."

Richard E. Marland, chief of the National Center's Injury Control Program said that a pilot demonstration in Kansas City of the uses of retro-reflective material for pedestrians and cyclists last September was highly successful. The demonstration was sponsored by the Public Health Service, The Greater Kansas City Area Safety Council, and the Kansas and Missouri Committees on Trauma of the American College of Surgeons and four manufacturers of retro-reflective devices.

Future demonstrations similar to the one in Kansas City are planned for early in 1968 in Dallas, Atlanta, and Washington, D. C.

"The pedestrian injury problem annually accounts for 8,800 fatalities and an estimated 500,000 persons injured," Mr. Marland said. "We know that more than half of the fatalities—4,800—and many of the injuries occur at night. We also know that many of these deaths and injuries happen because the motorists failed to see the pedestrian or cyclist.

"In Finland and Sweden, there have been no reports of injuries or deaths among the large numbers of pedestrians who wear tags of retro-reflective material. We want to find out whether this same approach might be used in our country as one way to deal with this serious problem."



who goes for checkups?

A vital question. For if early diagnosis and treatment can cure cancer, obviously regular health checkups are essential. In a survey conducted for the Society, we discovered that only 26% of those questioned had such regular checkups. But 90% said, *if their physicians told them to do so,* they would have annual checkups.

This confirmed what we have long known—your key role, doctor, in *activating* your patients in good health practices. We alert the public with facts about cancer. You follow through by urging regular checkups. A life-saving combination.

AMERICAN CANCER SOCIETY.

Woman's Auxiliary News

The President Visits

Boone County

Mrs. Max E. Olsen was a guest of the Boone County Auxiliary at a luncheon held in the Boone Golf and Country Club on November 2. Following the luncheon she gave an informal message and answered questions from the group. She also was a guest at the Health Careers Tea held later in the day (see the accompanying picture).

Jefferson County

Mrs. James Dunlevy was hostess to the Jefferson County Medical Auxiliary for its November luncheon at the Stever House, in Fairfield. Mrs. Max Olsen, state president, was a guest. She spoke informally to the group, telling of medical education funds and the state meeting in April. She also discussed other aspects of Auxiliary work with the group.

Mrs. William Baumann, the county Auxiliary president, was in charge of the meeting. Announcement of and arrangements for the Homebound Handcraft Sale to be held at Seifert's were presented.

Grundy County

The Grundy County Auxiliary turned out 100 per cent on a cold, rainy and blustery night for a meeting with Mrs. Max Olsen, the state Auxiliary president. Warmth of friendship and congeniality were the keynotes of the evening, as the Grundy County Medical Society and Mr. John Kohl, the hospital administrator, shared their annual Thanksgiving dinner meeting with the doctors' wives. Enthusiasm ran high as many new projects were discussed and old ones reviewed. Bloodmobile plans were reported, and a list of 200 volunteer donors was compiled for its November visit.

Were Her Teachers Wrong?

To the Editor:

Teachers can be wrong. My teachers taught: In a democracy, the will of the majority is the law of the land. To change or make laws, the majority rules. The weapons of the minority are freedom of speech and freedom to vote.

At 21, as I became eligible to vote, all aspects of socialism seemed repulsive and undemocratic to me. However, election after election failed to sway votes. Each ballot proved the majority favored socialism. Socialism grew stronger and stronger. All through the years I did what I was taught: "Exercise freedom of speech and the right to vote." I met defeat after defeat.

Today many teachers teach: "The law of the land need not be 'your law.' Let those who like the law obey it. Dissidents should rally, march, use threats, sit-ins, and all forms of coercion. For this activity you deserve the respect of the intellectuals. If socialist legislation is repulsive to you, show your minority dissent through violence. Only the stupid resort exclusively to freedom of speech and the right to vote as a means of changing laws."

My teachers must have been wrong . . .

Lillian (Mrs. R. F.) Nielsen

Volunteer Friendly-Visitor Training

Friendly visiting is a community service designed to bring some friendship and understanding to chronically ill, homebound patients of all ages, with special emphasis on the elderly. This direct-service program will supplement (but never replace) the professional services needed by the confined aged and the chronically ill by helping them to maintain contact with their community, for social health is an absolute necessity for everyone. In our nation there are some 18 million elderly persons for whom time passes very slowly. People who are sick at home need something beyond physical care. The Volunteer Friendly Visitor's role is of great value to the recipient. Many times the greatest contribution a visitor can make is to be a good listener. Other benefits they provide consist of reading to the patient, writing letters, interesting the visitee in old or new hobbies, and discussing community and world events. Private and rest homes are easily within each Auxiliary's reach, or each member's reach, and think how much good a visitor can do.

Volunteering is also important to the volunteer. She really needs to give time, effort and devotion to others. Everyone needs to be needed!

It will be a pleasure and a privilege for me to send specific information regarding this tremendously needed program on request.

Mrs. Virgil Ray Forester, *Chairman*
Volunteer Friendly Visitor Training Program
2336 Belleview Drive
Oklahoma City, Oklahoma 73112

'Operation Adoption' Launched to Win New Members

"We need a person-to-person approach to win new members to the Auxiliary," urges Mrs. Howard Liljestrand, national first vice-president and membership chairman. "Let's get going with 'Operation Adoption' right now."

Here's how Operation Adoption works:

1. With the help of your medical society, make a list of all prospective members.

2. Invite each Auxiliary member to pick a person from the list for three months, six months or a year—as long as it takes to interest her in the Auxiliary.

3. Give the "adoptee" the "sorority rush." Escort her to meetings, give her copies of MD's WIFE, invite her and her husband to your home, and clue her in about current Auxiliary activities and projects.

4. Take her to a membership coffee held by your Auxiliary for prospective members. Pull out all the stops in an effort to make her feel at home.

Bike Rules Most Important for Safety

Even though it is becoming chilly, many youngsters are still riding their bikes to school, to the store, or just for fun. There are rules for bicyclists which should not be ignored. Bicycle safety should be an important part of the School Safety program. Here are a few basic rules to follow for maximum bicycle safety:

1) Figure out the safest route and follow it. Try to stay clear of busy streets. If it is necessary to cross a busy street, walk the bike at a protected corner—one where there's a signal, a policeman, or a crossing guard.

2) Drive your bicycle as far over on the right-hand side of the street as you can so cars can pass easily.

3) Try to stay in a straight line.

4) Before turning onto a street, stop and look in all directions for traffic that may be close.

5) When riding at night or on dark days, wear something light colored and turn on the bike lights.

6) Never hitch a ride by grabbing on to a moving car or truck. A sudden stop or jerk can easily cause a serious accident.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

Can't Swim? Learn "Drownproofing"

The Public Health Service has announced a new technique, called "Drownproofing" which can be learned by adults and youngsters who cannot swim. The technique consists of a series of arm and leg movements performed in the water by a person moving up and down, instead of forward, as in swimming. If correctly performed, drownproofing allows a person to survive for hours, even in rough water, claims the Chief of the Injury Control Program. The directions are being distributed by the National Center for Urban and Industrial Health in Cincinnati. The card was prepared by the Center's Injury Control Program in cooperation with the American Red Cross, and also contains other water safety information. It may be obtained by writing to the Injury Control Program, National Center for Urban and Industrial Health, 222 East Central Parkway, Cincinnati, Ohio 45202. (News release from U. S. Department of Health, Education, and Welfare, September 19, 1967.)

Avoid Spray-Can Accidents With These Simple Rules

One of the most common and most convenient means of packaging these days is the pressurized spray can—but it can also become a serious hazard if proper precautions are not followed. Pressure cans are strongly made and carefully tested to withstand normal pressures, but there is no simple, completely safe way to get rid of the empty can. The can cannot be punctured if it is still under pressure, but at the same time, if an unpunctured can is incinerated, the result may be a serious accident, or even death to the unsuspecting person. It is best, advises the National Safety Council, to follow these suggestions while dealing with pressure cans: either bury the cans or have them hauled away for experienced disposal crews to handle; never place the cans on a stove, heater, or near any other source of heat that might exceed 120 degrees; never place them in the hot sun (there are suntan preparations which come in spray cans; to avoid an accident, wrap the can in a towel while on the beach); do not leave pressure cans in your automobile. The trunk, glove compartment, or even the seat can become dangerous places for the cans, especially on a hot day.

Health Careers Tea—Boone



Pictured here with Mrs. Max Olsen, Minden, State President of the Auxiliary to the Iowa Medical Society, who presided at the Health Careers Tea at Boone are, from left to right, Miss Lynn Sunstrom, Miss Cheryll Hollingworth, Miss Mary Ann Davis, Mrs. Charles Linden, whose husband is the administrator at the Boone County Hospital, and Mrs. Wayne Rouse, president of the Auxiliary to the Boone County Medical Society.

The Boone County Auxiliary was hostess at the annual tea, in November, for all junior and senior girls in Boone County high schools who are interested in health careers. Honored guests included girls from Boone, Ogden, United Community, Grand Community and Ryan High Schools, at Boone, Boone Junior College, and Madrid High School.

Mrs. Max E. Olsen, of Minden, president of the State Auxiliary was present for the occasion. Other special guests were sponsors of health careers clubs, heads of departments at hospitals and representatives from other health-related fields.

Mrs. Olsen and Mrs. Charles Linden presided at the beautifully appointed pink, white and silver tea table.

Guest speakers for the afternoon were Miss Cheryll Hollingworth, a freshman at Iowa Methodist School of Nursing, Miss Lynn Sunstrom, a student at Iowa Lutheran Hospital School of Nursing, and Miss Mary Ann Davis, a senior student at Mercy Hospital School of Nursing, all in Des Moines. The speakers discussed informally their "way of life" as student nurses and gave the high school girls an idea of what to expect in following a nursing or some other health career. They furnished much interesting information concerning studies, schedules, and varied duties, as well as recreation and social life during off-duty hours.

Mrs. Wayne Rouse, of Boone, is president of the Woman's Auxiliary to the Boone County Medical Society. Mrs. John M. Wall was general chairman for the tea, and she was assisted by all other Auxiliary members in arranging for this event.

New Year's Resolution

I firmly resolve to be a patient pedestrian, rather than to become a pedestrian patient.

Safety Tip

Don't follow other cars too closely. For every 10 miles per hour of speed, allow at least 1½ carlengths between your car and the car ahead.

Around the Hawkeye State

Buchanan County

Members of the Woman's Auxiliary to the Buchanan County Medical Society would like to report some of their projects and events from September, 1967, to December, 1967.

In September we placed the AAPS Essay Contest information in all high schools, to give all students a good early start. We also placed every type of health-careers information in the four high schools, and have two very active clubs going at present. Students from the other two high schools have joined the active groups until they can organize clubs of their own, which we hope will be next year. The members heeded the advice of the state chairman, and made sure that TODAY'S HEALTH and HEALTH CAREER GUIDEBOOK were placed in all the schools. The schools that could not add these in their libraries were assisted by the Auxiliary as a project. A "Careers Day," was held during which our health careers was the program topic.

In October we held a "Garage Sale," and a percentage of the profits was sent to AMA-ERF.

In November we completed "Vision-Screening" in the local high school, and have plans to vision-screen in the local school for the retarded. In the spring we plan to vision-screen the pre-schoolers.

The members shipped to World Medical Relief, Inc. 480 pounds of drug samples, contributed by Buchanan County private practitioners and the physicians at the Independence Mental Health Institute, and two gross of soap purchased by the Auxiliary. The shipment also included approximately 50 bandages made by the members. That was our participation in the International Health Program.

November was the month in which we held our annual "Card Party." A percentage of the profits was sent to AMA-ERF. At the November meeting we were extremely happy to have Mrs. Elaine Olsen, the state president, present. It was most enjoyable to have her meet with our Auxiliary. We provided our Retarded School with money to serve Thanksgiving and Christmas dinners to the students.

December found us giving our Christmas Party at our County Home. Our December meeting closed a full and enjoyable half-year. A Silent Auction, though a fund-raising project, was also fun.

MRS. L. JOHN FLAGE
Publicity Chairman

Linn

The Future Nurses Club of Mt. Vernon High School heard a discussion of hypnotism in medicine at a recent meeting held in the Washington elementary school. Dr. William Bennett, of Marion, was the guest speaker.

The Club held a Christmas party for the preschool class at the county center for the retarded. The Club also collects old glasses for the "new eyes for the needy" project.

Polk

This year, Polk County Auxiliary Members are kept advised of news events by a monthly newsletter entitled, CAPSULES. This publication was originated by Mrs. Byron Merkel, the Polk County Auxiliary president, and it is written by her each month. CAPSULES is a most effective and welcome means of keeping members informed of topical events, as well as the time and place of the monthly meetings.

The Auxiliary to the Polk County Medical Society sponsored its annual Homebound Handcraft Sale in cooperation with the Easter Seal Society of Iowa, Inc. The sale was held during the week of October 9 through 14, and netted $1,563.32. The proceeds from each article sold is turned over, through the Easter Seal Society, to the handicapped person who made it.

Mrs. James W. Ryan, Jr. was chairman of the sale this year, and she was assisted by Mrs. Louis Noun, co-chairman. The following ladies served as day chairmen: Mrs. Henry Gurau, Mrs. Daniel Coughlan, Mrs. Charles Latchem, Mrs. Don Newland, Mrs. Charles Hull and Mrs. Ronald Maly. Twenty-seven other Auxiliary members served as saleswomen throughout the week. Mrs. Jim Myerly handled the publicity arrangements.

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Personals



Dr. George H. Ashline, of Keokuk, has been elected president of the Iowa Clinical Surgical Society. The group met at Ohio State University, in Columbus, on November 17.

Dr. Floyd H. Fillenwarth, of Charles City, a Life Member of the IMS, presented a travelogue "A Trip to the North," at a meeting of the Auxiliary to the American Legion post there, on November 20. He made his first trip to the Arctic Circle in 1904, and has returned to hunt and fish there more than 100 times. His latest adventure was during the past year, when he and his 14-year-old grandson went hunting for white whales. They succeeded in shooting two—no mean feat. He showed slides of that hunt, and of previous expeditions in every Canadian province other than British Columbia.

Dr. Ralph Lagoni, of Eldridge, addressed a PTA meeting at the North Scott Community Junior-Senior High School on Monday evening, November 13.

The first documented case of a child born deformed after its mother had taken LSD early in pregnancy was confirmed by **Dr. Hans Zellweger,** a professor of pediatrics at the U. of I. College of Medicine, on November 23. The mother was a 19-year-old Iowa resident, and she had taken LSD on four occasions during the seventh week of her pregnancy. Her baby girl had a deformed right leg. He said he and his associates had confirmed that the malformation was similar to those of infants born during the thalidomide episodes of the early 1960's. He called the evidence no more than presumptive. Studies of thalidomide babies showed that deformities occurred to the infants born to mothers who had taken that drug during the seventh week of pregnancy.

June 1, 1968, is the target date chosen for completion of a four-county mental health center in Fort Dodge. **Dr. Charles Wilson,** of Manson, president of the board of directors for the new facility, announced late in November that the medical director will be **Dr. L. K. Berryhill,** a psychiatrist who currently is director of the Jasper-Poweshiek center in Newton. Lutheran Hospital, Fort Dodge, will build a new psychiatric unit for use in connection with the center, and the counties to be served are Calhoun, Humboldt and Pocahontas, in addition to Webster.

Dr. Gary P. Hayes was guest speaker, on November 15, at a meeting of the Teenage Republicans (TARS), held at the courthouse there. He spoke about the history of medicine and about socialized medicine.

The first scoliosis clinic in Iowa was established in November at the Polk County Easter Seal Center, 2920 Thirtieth Street, Des Moines. It is to provide diagnosis and consultation, with recommendations for physical therapy, occupational therapy and social services to be performed by the Center's staff. **Dr. John H. Kelley,** a Des Moines orthopedic surgeon, has been named consultant for the clinic. The facility serves Polk County and central Iowa.

Dr. F. D. Christensen, who formerly practiced at Remsen, continues to undergo artificial-kidney treatments twice a week at St. Vincent Hospital, Sioux City.

At the November 21 meeting of the Marshall County Association for Retarded Children, held at Pleasant School, Marshalltown, **Dr. J. H. Gardner,** of the Woodward State Hospital-School, described the diagnostic-evaluative clinic at Woodward.

On November 28, **Dr. L. F. Parker,** of Iowa Falls, spoke to the Hardin County Nurses Association about his medical experiences in a mountain village in Guatamala. The meeting was held at Ellsworth Community Hospital, in Iowa Falls.

After almost 52 years of practice in Waterloo, **Dr. Albert J. Joynt** retired in mid-November. He will be 82 later this month, and is a 1912 graduate of the U. of I. College of Medicine. He plans to divide his time between his own home in Waterloo, and that of a daughter who, with her husband and three children, lives in Palatine, Illinois. Mrs. Joynt died in 1962.

Mrs. Beulah Burrell Johnston, wife of **Dr. Wayne A. Johnston**, of Dubuque, died at their home on November 20. Dr. Johnston, an associate member of the Iowa Medical Society, was one of the founders of Medical Associates, Dubuque.

The DES MOINES SUNDAY REGISTER for November 26 contained a lengthy article about **Dr. Elmer M. Smith**'s recent tour of duty with the AMA Volunteer Physicians for Vietnam program. Following are some of the medically interesting statements attributed to him: "We had a disproportionate number of suicide attempts, and I suppose that would reflect prolonged tension." "The really serious cases sometimes never got to us. One reason is that travel in South Vietnam is difficult and often dangerous. The other is that the people don't want their relatives to die in the hospital. For one thing it costs so much to get the body back home to bury it." "Patients are given an entire day's ration of medicine in the morning and are responsible for administering it themselves. . . . Unfortunately, some patients mistakenly take all their medicine at once." "The plague is transmitted by fleas that carry it from rats which are susceptible to the disease. If you can eliminate the rats, you can cut down on the plague. Our purpose in being over there is to teach the Vietnamese better and more scientific methods of preventing disease." "You never see a fat patient in Vietnam. They're all thin and easy to examine."

Dr. Smith's wife, **Mary Louise**, the Republican National Committeewoman for Iowa, was quoted as saying, "I like to see someone doing something he enjoys." Dr. Smith is encouraging other Iowa physicians to spend two months in Vietnam.

Dr. Donald W. Powers will become resident pathologist at Mary Greeley Memorial Hospital, Ames, this month. A native of South Dakota, he attended high school in Sioux Falls and began his medical training at the University of South Dakota. He took his M.D. from the University of Wisconsin in 1960, and subsequently interned at Broadlawns-Polk County Hospital, Des Moines. After a short time in general practice at Rock Rapids, Iowa, he took residency training in his specialty at the Mayo Clinic, and spent a year or slightly more as an associate pathologist in St. Luke's Hospital, Aberdeen, South Dakota. He completed his military service before starting medical school. He and his wife have a son and two daughters.

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At the November meeting of the Buchanan County Medical Society, held in Independence, **Dr. Raymond G. Bunge,** professor of urology at the U. of I. College of Medicine, spoke on intersexuality. Incidentally, he suggested that some of the women athletes in international competition may genetically be males.

Dr. Leo Sedlacek, a Cedar Rapids psychiatrist, addressed members of the Des Moines County Medical Society and their wives at the Klein Memorial Hospital, Burlington, on November 14. He was quoted as saying: "The alcoholic . . . has taken an overdose of a potent drug. The difficulty arises when, after the patient has recovered from the acute phase of his illness, everyone expects him to put forth all the effort himself, even though he is going back to the same society and the same problems. Let's compare the alcoholic with a patient who has been in a sanatorium for the treatment of tuberculosis. After the disease is brought under control, we don't expect him to go home and immediately resume his former role. His case is watched, and all the resources of the community are offered to help his recovery and rehabilitation. He is never cured. The same goes for the alcoholic. Once an alcoholic; always an alcoholic. It is the responsibility of society to help the alcoholic control his problem—every facet of society, the family, the church, the individual's friends and colleagues, industry, the medical profession—everyone!"

Dr. Gene M. Kuehn, of the Park Clinic, Mason City, spoke on sex education at the November 15 meeting of the Clear Lake Parent-Teacher Association. He showed a motion picture entitled "Parent to Child About Sex." He came to Mason City in January, 1965, and recently was made a diplomate of the American Board of Obstetrics and Gynecology.

In resigning his post as Waterloo's health officer, effective January 1, **Dr. Jack Barga** announced his intention to begin a five-year otolaryngology residency in Seattle within a few months.

Among the Iowa doctors who attended the annual meeting of the Interstate Post-Graduate Medical Association of North America, at the Palmer House, Chicago, November 4-10 was **Dr. B. T. Whitaker,** of Boone, who is serving his fifteenth consecutive year as a trustee of the organization.

Dr. Addison Brown, a Des Moines gynecologist, was given the American Cancer Society's 15-year volunteer service award at the Iowa Division's annual meeting on November 14.

The Pocahontas County Medical Society has contributed $3,000 to the Iowa Medical Foundation. **Dr. J. B. Theilen,** of Fonda, secretary of the organization, said that the sum is part of the proceeds of polio immunization clinics conducted in Pocahontas County under the direction of the County Medical Society.

Dr. Kenneth Gee, of Shenandoah, spoke to a PTA meeting in Sidney on November 16. His talk was entitled "Who's Pressuring Johnny?" and he said, among other things, that many of the pressures exerted upon our children nowadays are not harmful at all.

Dr. William Jackson, a Sioux City pediatrician, was the guest speaker at a tri-state conference on birth defects for young adults held there on November 18 under the sponsorship of the National Foundation. This year's March of Dimes will be the thirtieth, and the tenth since the fight against poliomyelitis was won and the organization turned its attention to birth defects. Teenagers from Iowa, Nebraska and South Dakota participated, along with Sioux City nursing students.

At a meeting of District 15 of the Iowa Nurses Association, held at the Buena Vista County Hospital, in Storm Lake, the guest speaker was **Dr. Robert H. Mailliard,** of Storm Lake. His topic was silver-nitrate and other treatments for burns.

Dr. Dale Harding presented a review of the book HOW TO KEEP FIT AND ENJOY IT at the November 15 meeting of the Lions Club of his town, Eagle Grove. He pointed out that degenerative diseases commonly develop in overweight people, and that no more than two per cent of such persons can be cured. Thus the proper course of action is prevention. Yet exercise—one of the most effective preventives—has to be fun if one is going to persist in it. On November 27 Dr. Harding discussed and demonstrated hypnosis at a Rotary Club meeting in Eagle Grove.

Dr. Sergio Rabinovich, a member of the faculty in internal medicine at the U. of I., is making a study of interferon, supported by a grant from the Iowa Thoracic Society, the medical branch of the Iowa Tuberculosis and Health Association. Interferon is a protein produced by human and animal cells infected by a virus. Unlike an antibody, which is the opponent only of a specific disease agent, interferon protects the body against many viruses, interfering with their reproduction. It acts before antibodies can be built up, but it has a relatively short lifetime, whereas antibodies can

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confer lifetime immunity in many instances. Dr. Rabinovich says that if a practical way can be found to stimulate cells to produce larger than normal quantities of interferon, they could retard or halt infections already contracted. He has succeeded in stimulating production of the substance in mice by injecting the animals with live or inactive viruses. He is now beginning similar experiments with rhesus monkeys. Other researchers, he says, have been partially successful at isolating pure interferon for use in treatment.

Dr. Fred J. Ansfield, professor of clinical oncology at the University of Wisconsin Medical School, was the principal guest speaker at a cancer-control program for clergymen from 10 northwest Iowa counties on November 16 at Westmar College, in LeMars. The chairman of the meeting was **Dr. Paul Ferguson,** of Lake City, representing the IMS Committee on Medicine and Religion.

Dr. Joseph Galles made some interesting comments on the Vietnamese during an interview that was reported in the November 19 issue of the CEDAR RAPIDS GAZETTE. Now practicing with **Dr. William Bennett** in Marion, Dr. Galles spent six months with the Seabees in South Vietnam during 1966. He said the civilians there live in poverty, filth and disease. Because the Seabees didn't have many casualties, the medics assigned to them were permitted to bring civilians in for medication. Medical help, he said, was rejected by most of the adults because, as Buddhists, they had faith that after death they would experience immediate reincarnation, and could scarcely avoid having a better lot in their next time round. "We were usually able to clear up the kids' medical problems," Dr. Galles said, "because they were cooperative. But the adults were another matter. An example of adult stubbornness is the chewing of betel nut bark. Chewing the bark is like taking narcotics. The people complained of dizziness and nausea, but we couldn't stop them from chewing the bark."

An 83-year-old Davenport physician was robbed at gunpoint and bound to a chair with surgical tape on Friday afternoon, November 17, by a bandit who entered in the guise of a patient. **Dr. Robert Taylor** was in his office when the man entered, waited until a patient left, then locked the doors and confronted the doctor with a small black pistol. After taking about $50, he tied the doctor's hands and placed tape over his mouth and eyes. After a short time Dr. Taylor was able to pull his hands from the tape and summon aid.

Dr. and Mrs. Russell Conkling, of Cedar Rapids, suffered multiple injuries, about 7 p.m. on Sunday,

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November 19, when their car crashed on Dubuque County Road G, about four miles north of Cascade. Dr. Conkling was treated for minor injuries at the hospital in Monticello and released. Mrs. Conkling was treated first at Monticello, and then transferred successively to St. Luke's, in Cedar Rapids, and to University Hospitals, in Iowa City. On the next day she was reported in fair condition with face cuts and eye injuries.

Mr. Ellis J. Levitt, chairman of the board of Dial Finance Companies, presented **Dr. C. Harlan Johnston** the key for the new doctors' library at Iowa Lutheran Hospital, in Des Moines, during a ceremony on November 20. Dr. Johnston is director of medical education there. Mr. Levitt had contributed $4,255 to the project, and the library will bear his name.

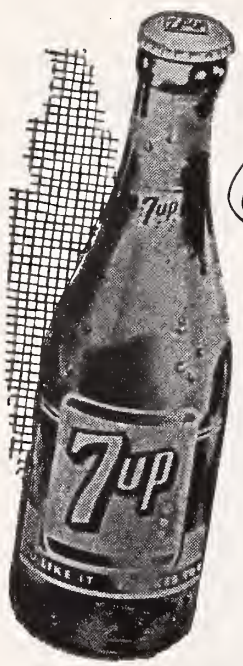
Dr. Ronald L. Villella, formerly chief of clinical and anatomical pathology at Fitzsimons Army Hospital, Denver, has assumed the duties of associate pathologist at Mercy Hospital, Des Moines. He took his M.D. at the University of Minnesota Medical School in 1960, served his internship in Tacoma and took his residency in Honolulu.

Dr. Durward Hall, of Springfield, Missouri, a member of the U. S. House of Representatives since 1960, was the principal speaker at a dinner meeting of the Pottawattamie County Republican Party, in Council Bluffs, on November 18.

At a meeting of the Mahaska County Medical Society, held at the hospital in Oskaloosa on November 14, **Dr. Maurice D. Schnell,** director of the U. of I. Comprehensive Evaluation and Rehabilitation Center, at Oakdale, spoke on "Rehabilitative Medicine: Its Development and Growth in Iowa."

An addition is to be made to the facilities of Surgical and Orthopedic Associates, 927 West Fourth Street, Waterloo, that will enlarge the floor space to 2,400 sq. ft. The group consists of **Drs. Clark Cooper, Arthur W. Devine, Lewis B. Harned, C. J. Mikelson, Norman J. Siderius, Edward J. Sitz** and **Lewis L. Zager.**

Dr. David Wall, an obstetrician and gynecologist with the McFarland Clinic, in Ames, attended a meeting of the Pan-American Medical Association, in Buenos Aires, Argentina, November 23-28. He made a presentation there based on the recent obstetrical experience of his group, and closely



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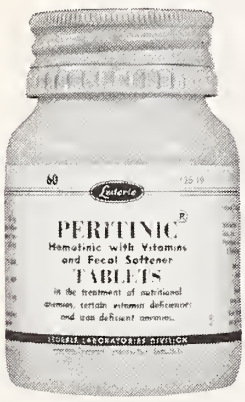
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resembling the paper he published in the December, 1967, issue of this JOURNAL.

Dr. John Gambill, superintendent of the State Mental Health Institute at Clarinda, disagrees sharply with **Dr. Paul Huston,** professor and head of psychiatry at the U. of I. College of medicine, regarding the probable effect of the rapidly increasing numbers of mental health centers upon admissions to the state mental hospitals. Dr. Huston had told a committee of the General Assembly of Iowa that he expects screening at the regional centers to decrease admissions at the institutes by at least 50 per cent. Dr. Gambill expects the local facilities to raise the number of admissions to his institution. **Dr. S. M. Korson,** head of the hospital at Independence, agrees with Dr. Gambill. "We continue to break records on admissions every year, especially in the areas where mental health clinics are situated," he reported.

Though admissions statistics soar, patient censuses decline. "I'd like to see the day come when we are below 200 patients," Dr. Gambill says: Since his first visit to Clarinda in August, 1967, the hospital count has dropped below 400 for the first time, compared to 1,700 about 20 years ago. About 180, or 9 per cent of the current patients have been at the Clarinda hospital for more than a year, but the average length of stay at Iowa's mental hospitals is now 53 days, and he says that Clarinda's figure is near that average.

"We must work hand-in-glove with all other groups in trying to attain our goal," Dr. Gambill says. "The state hospitals are part of a complex composed of mental health clinics, mental health centers, state hospitals, general hospitals, nursing homes, etc."

Dr. Allen W. Byrnes, who headed the Veterans Administration Hospital at Knoxville, Iowa, several years ago, retired at the end of 1967 as director of a similar institution in Battle Creek, Michigan. A dinner in his honor was held there on December 13 by the local American Legion post. He left Knoxville in 1963.

Some 35 people met at the Elks Country Club, in Council Bluffs, on November 29 to consider organizing a Southwest Iowa Regional Health Planning Council. One of the speakers was **Dr. Arthur P. Long,** of Des Moines, the State Commissioner of Health. **Dr. I. J. Hanssmann** was chosen as chairman of the temporary committee to plan the program, and the other physicians on that committee are **Dr. Maurice P. Margules, Dr. James B. Conlon** and **Dr. Emmett B. Mathiasen.**

On December 4, **Dr. Montague S. Lawrence** talked to the Maquoketa Lions Club about his ex-

periences with *SS Hope* on the west coast of Africa. Dr. Lawrence is a professor of thoracic surgery at the U. of I. College of Medicine.

At the December 6 meeting of the Johnson County Medical Society, held at the University Athletic Club in Iowa City, **Dr. Edward W. Green**, an assistant professor of surgery who recently served with the AMA's Volunteer Physicians program, spoke on "Civilian Medicine in Vietnam."

Dr. George D. Callahan resigned his post as medical examiner for Johnson County on December 1 after serving first as coroner and recently as medical examiner for a total of 25 years. He cited illness as his reason. **Dr. T. T. Bozek** was appointed assistant medical examiner in September, 1967, and has been the acting examiner during Dr. Callahan's illness. Both men are Iowa City general practitioners.

In an interview published in the November 30 issue of the U. of I. campus newspaper THE IOWAN, **Dr. Daniel B. Stone**, executive associate dean of the College of Medicine, was quoted as saying that though more than 50 per cent of U. of I. medical graduates go outside of the state after graduation, 80 per cent of them return after finishing their internships, residencies and/or military service. Dr. Stone referred to a study that is being made by the faculty of the College of Medicine in an attempt to find a remedy or a combination of remedies for the family-physician shortage in the state, and said that it should be completed by June. The possibilities that he mentioned included air-transportation of patients to medical centers, creation of a family-medicine specialty, and training sub-professional doctors' assistants resembling the medical corpsmen that the military services have used for many years.

The State Department of Health has provided a breakdown on the candidates who have failed the Iowa licensure exam since 1963, when D.O.'s and M.D.'s began taking identical tests. Earlier **Mr. Ronald Saf**, the Board's executive secretary, had refused, saying that the figures "might show D.O.'s in a bad light." THE DES MOINES TRIBUNE for December 20 reported that during that period 586 M.D.'s and 31 D.O.'s took the Iowa test, and that just four candidates in each of the two groups failed it.

Dr. Robert H. Osborn, a 1966 graduate of the U. of I. College of Medicine who is in the first year of an obstetrics and gynecology residency in Iowa City after interning at Emanuel Hospital, Portland, Oregon, won an award for a paper, "Plasma Progesterone Levels in Abortion Induced by Intra-amniotic Hypertonic Saline," which he presented at a meeting of District VI of the American College of Obstetricians and Gynecologists, in Iowa City December 12. The Junior Fellow Division of the organization judged his presentation best of the 11 reports that were submitted. The meeting was attended by more than 200 specialists from Iowa, Illinois, North and South Dakota, Nebraska, Minnesota, Wisconsin and two Canadian provinces. He is he son of **Dr. C. Robert Osborn**, of Dexter.

Dr. E. E. Moore succeeded **Dr. J. J. Weyer** as president of the Webster County Medical Society at the group's "Christmas meeting," on December 1. In the election held at that time, **Dr. J. F. Kelly** was named president-elect; **Dr. J. H. Habermann**, vice-president; **Dr. F. E. Giles**, secretary; **Dr. R. W. Lee**, member of the Board of Trustees; **Drs. H. H. Kersten** and **L. J. O'Brien**, delegates; and **Drs. A. P. Echternacht** and **F. D. Lawson**, alternate delegates. All of them practice in Ft. Dodge.

At the December 5 meeting of the Marshall County Medical Society, **Dr. A. B. Cloud** was elected president of the organization for 1968. **Dr. E. L. Jacobs** was named secretary-treasurer; **Drs. L. O. Goodman** and **Ray Robinson**, delegates; and **Drs. D. S. Reading** and **W. R. Wessels**, alternate delegates. Except for Dr. Robinson, who practices in State Center, all of them are located in Marshalltown.

The identical officers of the Union-Taylor Medical Society and the Greater Community Hospital at Creston were all reelected at a meeting held on December 6. They are **Dr. Robert H. Kuhl**, president; **Dr. William A. Fisher**, vice-president; and **Dr. Dallas L. York**, secretary. **Dr. Howard G. Beatty** is the liaison officer between the Hospital's medical staff and its trustees. Dr. Kuhl is the delegate and Dr. York the alternate from Union County, and **Dr. R. W. Boulden**, of Lenox, is the delegate, and **Dr. John F. Hardin**, of Bedford, is the alternate from Taylor County.

Dr. Donald T. Stroy, of Council Bluffs, was hospitalized on December 3 after being overcome by smoke in a fire at his home. The fire was discovered at 12:10 a.m., while he was home alone. He was heard calling for help, but neighbors were unable to walk through the dense smoke to rescue him. When firemen arrived, they put on gas masks and carried him outside. The fire apparently had

been started by a cigarette that fell into a crevice in a couch, and there were signs that Dr. Stroy had tried to put it out.

Dr. Wouter H. Verduyn held open house at his new medical office building in Reinbeck on December 2.

The freshmen and sophomores at Primghar High School were all taught the Medical Self-Help course, one hour per week, by **Dr. Andrew D. Smith,** a general practitioner there, between mid-October and the end of November.

During the December 5 meeting of the Wapello County Medical Society, at the Ottumwa Country Club, **Dr. Lynn O. Litton,** head of orthopedic surgery at the University of Missouri School of Medicine, Columbia, discussed scoliosis.

A new intercom system at the Immaculate Conception High School, Charles City, is a gift from **Dr. James G. Baumann.** It can be used not only for two-way conversations between the principal's office and 14 classrooms, but since it includes an AM-FM radio and a record player, it can be used for various instructional purposes.

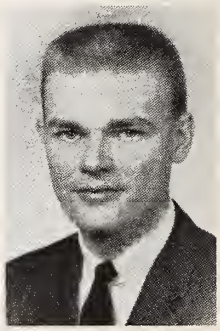
At a meeting of the Wapello County Chapter of the American Cancer Society, at the Central Fire Station in Ottumwa on December 4, **Dr. Richard A. Hastings** discussed the work of the tumor clinic at Ottumwa Hospital.

Dr. Malcolm A. Royal has been nominated for the 1967 Des Moines Tribune Community Service Award. The three people who suggested him referred to his service to the Des Moines Public Schools, the Iowa Children's Home Society, well-baby clinics, Planned Parenthood, blood banks and other institutions. In conclusion, they said, "At the tender age of 86, he still can be seen in the halls of [Iowa] Lutheran Hospital, a rose in his lapel, with bouquets of flowers for nurses' desks or for patients who might not otherwise receive them."

Three Charles City doctors were named 1968 officers of the Floyd County Hospital medical staff at a meeting held in late November. They are **Dr. R. H. Huber,** president; **Dr. E. E. Schmiedel,** vice-president; and **Dr. D. L. Trefz,** secretary-treasurer. Dr. Huber is also the new president of the Floyd County Medical Society, succeeding **Dr. B. V. Anderson,** who practices in Greene.

Dr. H. N. Hirsch was elected president of the medical staff of St. Vincent Hospital, Sioux City, at a meeting held on December 4, succeeding **Dr. R. C. Mugan. Dr. Ahmad Akbari** is the vice-president, and **Dr. William S. Thoman** the secretary-treasurer. **Dr. Homer Skinner,** of Carroll, spoke to the doctors and their wives about the Health Planning Council of Iowa that he heads.

Dr. Thomas H. Largen joined **Dr. Frederic M. Ashler** on September 1 in the practice of medicine at Hamburg. Dr. Largen earned his M.D. degree at the University of Nebraska in 1964. He interned at St. Elizabeth Hospital in Lincoln, Nebraska. From 1965 until 1967 Dr. Largen was stationed at Travis Air Force Base, in California.



Dr. Largen

In its first issue, distributed on the Iowa City campus November 17, the UNIVERSITY OF IOWA SPECTATOR reported an interview with **Dr. Robert C. Hardin,** dean of the College of Medicine, regarding the physician distribution problem and possible remedies for it. It quoted the dean as saying there are eight per cent more people and 15 per cent fewer physicians in Iowa today than there were 25 years ago, and that the number of people per physician rose from 884 in 1930 to 1,130 in 1965. Moreover, in 12 relatively urban counties there are 700 people per doctor, but in 52 counties there are 1,500 or more people per physician. Dr. Hardin is said to have remarked: "You just can't get young men to go to the little towns. I can't even get young men to go to a small town for two weeks so the physician there can take a vacation." Furthermore, according to the newspaper, he said that the tendency of young doctors to specialize cannot be changed by offering subsidies to them if they remain in general practice, or by increasing the numbers of medical-school students. Curriculum changes approved last fall will clear the senior year for specialized study, and one of the areas of specialization will be family medicine, a modernized version of general practice.

Dr. Hardin was quoted as saying: "There should be studies of the need for a state-supported transportation system to take a patient wherever he ought to go—and this should include air trans-

portation, preferably helicopters." According to the reporter, Dr. Hardin sees medical practice becoming increasingly hospital-centered, and thinks physicians should stop building separate offices and, instead, should move into a hospital wing. The report quoted the dean as saying that locations in hospitals would make numerous assistants available to the doctor, thus increasing his productivity.

The Polk County Heart Association is sponsoring a new series of live, half-hour programs over KDPS-TV, the television station of the Des Moines Public Schools. The physician participants on the November 2 program were **Dr. Julius Connor,** director of the Des Moines-Polk County Health Department, and **Dr. Walter Eidbo.** The date and time each month are the first Tuesday at 8:30 p.m. Dr. Eidbo is coordinator for the series.

Dr. Roy W. Overton has been appointed city health director for West Des Moines.

Dr. Paul F. Tempel terminated his work with the Des Moines Child Guidance Center at the end of December, and immediately became medical director of Beloit of Ames, a residential treatment center for children with emotional problems, operated by the American Lutheran Church, at 1323 Northwestern, Ames 50010. The services of the institution are being expanded to include outpatient psychiatric consultations.

Dr. S. F. Singer, who has practiced radiology in Ottumwa for more than 25 years, has closed his office there and has moved to Fort Lauderdale, Florida.

The physicians who were elected on November 11 and currently are officers of the American Cancer Society, Iowa Division, Inc. are **Dr. Fred A. Hansen,** Red Oak, president; **Dr. Harold W. Morgan,** Mason City, treasurer; **Dr. Richard A. Hastings,** Ottumwa, chairman of the board; **Dr. R. E. Weland,** Cedar Rapids, chairman of the Professional Education Committee; **Dr. Robert F. Deranleau,** Perry, chairman of the Service Committee; **Dr. Duane D. Warden,** Council Bluffs, chairman of the Crusade Committee; and **Dr. Howard B. Latourette,** Iowa City, medical and scientific director. **Titus C. Evans, Ph.D.,** professor and head of radiation research at the U. of I. College of Medicine, is chairman of the Division's Awards and Grants Committee.

Dr. Steven H. Cornell, an associate professor of radiology at the U. of I. College of Medicine, addressed the annual meeting of the Radiological Society of North America, at the end of November in Chicago, on "Angiographic and Catheterization Findings in Patients With Difficulty Following Complete Correction of Tetralogy of Fallot." The co-authors of his presentation were **Dr. Peter Vlad,** a professor of pediatrics, and **Dr. Johann Ehrenhaft,** head of thoracic surgery at the U. of I.

Dr. Ian Maclean Smith and **Dr. Sergio Rabinovich,** of the Department of Internal Medicine at the U. of I., participated in the fourth annual Latin American Congress on Microbiology, in Lima, Peru, November 28 and 29. Dr. Smith reported on oxygen metabolism in mice infected with staphylococci, and Dr. Rabinovich discussed mechanisms of protection against influenza and experimental staphylococcal infections. Dr. Rabinovich is a former faculty member of the University of San Marcos, in Lima, and the University of Arequipa. He was to lecture at both those institutions while in South America.

Dr. D. G. Bock, of Ft. Dodge, returned home on December 9 from La Jolla, California, where he attended a 15-day short course presented by the American College of Cardiology at the Scripps Clinic and Research Foundation.

On January 11, **Dr. John J. Fitzpatrick** is to open a practice of ophthalmology and ophthalmic surgery in the Bennett Building, in Council Bluffs. A native of Omaha, he took his M.D. at Creighton in 1961, served a three-year residency at the University of Nebraska Hospitals, and for the past two years he has been a lieutenant commander in the Navy Medical Corps, stationed in New England. He and Mrs. Fitzpatrick and their three daughters will live on the Nebraska side of the Missouri River.

All the officers of the medical staff at Klein Memorial Hospital, Burlington, were reelected for another year. They are **Dr. Leo Wallace,** president; **Dr. F. H. Aid,** vice-president; and **Dr. A. R. Sandrock,** secretary. **Dr. Robert Crawford** and **Dr. Warren Zabloudil** were reelected to the executive committee.

Dr. John A. Lanning moved from Waukon to Charles City early in December, and opened an office in the latter on December 11. He is a 1960



graduate of the Oklahoma University School of Medicine, he interned in Bakersfield, California, and he served in Japan with the Navy from 1961 to 1964. Subsequently he served part of a residency in internal medicine at the University of Minnesota's affiliated hospitals in St. Paul and Rochester.

The guest speaker at the November 30 meeting of the Dallas-Guthrie Medical Society, in Panora, was **Dr. Meredith Saunders,** a Des Moines ophthalmologist.

Dr. Frederic W. Stamler, a professor of pathology at the U. of I. College of Medicine, presented a research report, in mid-December, at the first Pan-American meeting of the International Academy of Pathology, in San Juan, Puerto Rico. The meeting was held on December 10 to 17 in conjunction with the Sixth Latin American Congress of Pathology. Dr. Stamler spoke on "Estrogens in the Prevention of Progesterone-induced Toxemia of Pregnancy."

Dr. Allan G. Felter, of Van Meter, has been appointed to a three-year term beginning March 3 as governor, for Iowa, of the American College of Cardiology.

Dr. Ian M. Smith, a professor of internal medicine at The University of Iowa, spoke to the Clinton County Medical Society Dec. 12 in Clinton. His topic was "The Use of Modern Antibiotics."

Dr. Robert W. Merrill, a specialist in physiatry, began practice recently at the Younker Rehabilitation Center, Iowa Methodist Hospital, Des Moines. He took his M.D. at the University of Minnesota in 1938; he practiced general medicine at Morris, Minnesota, from 1939 to 1965, except for the years 1942 to 1946 when he served in the Navy; and he had a fellowship in physical medicine and rehabilitation at the University of Minnesota Hospitals from 1965 to 1967.

Deaths

Dr. Alvin A. Rose, 87, of Story City, died at his home on November 14, following a long illness. A 1907 graduate of the University of Nashville, in Tennessee, he practiced medicine at Gilbert from 1918 to 1923, before moving to Story City. In October, the Story City Lions Club presented him its first Community Service Award.

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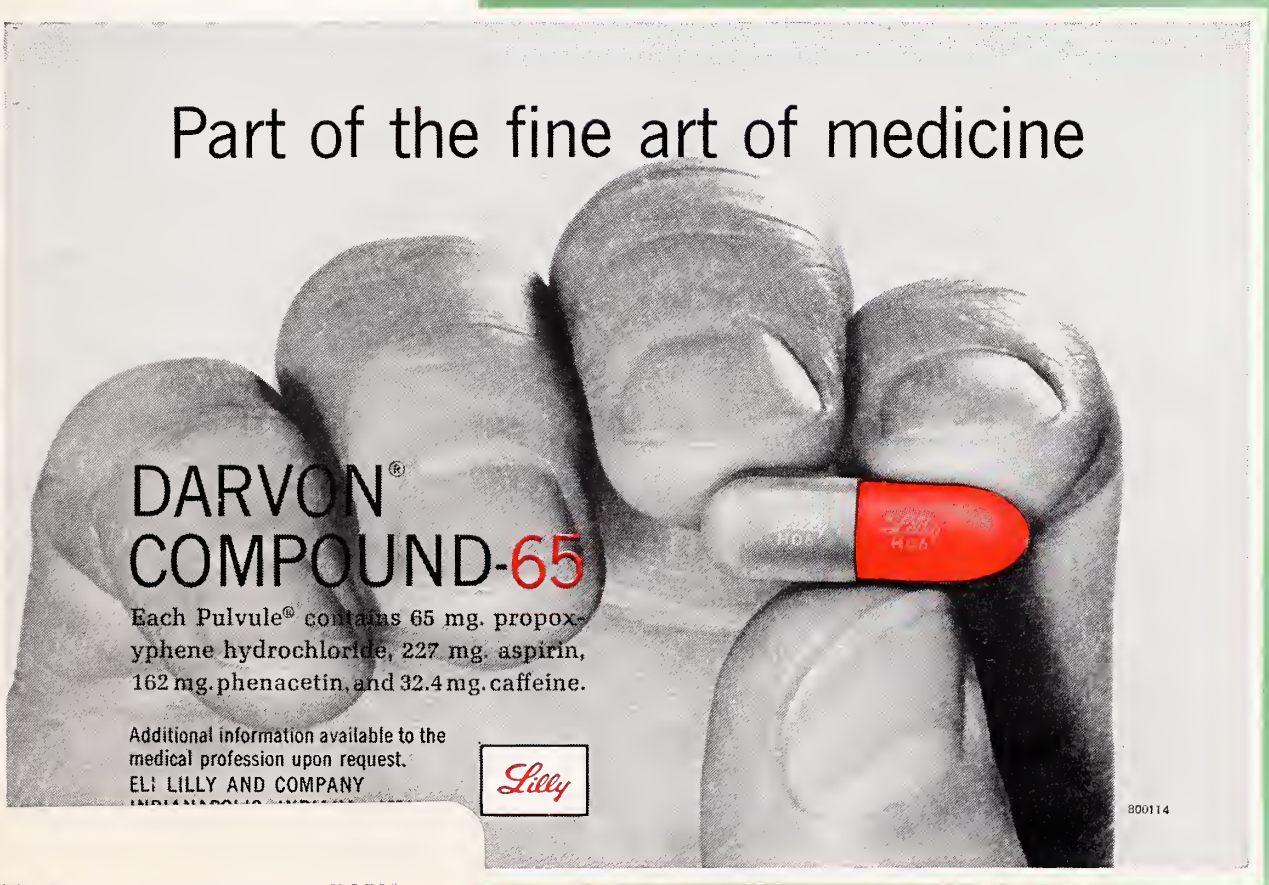
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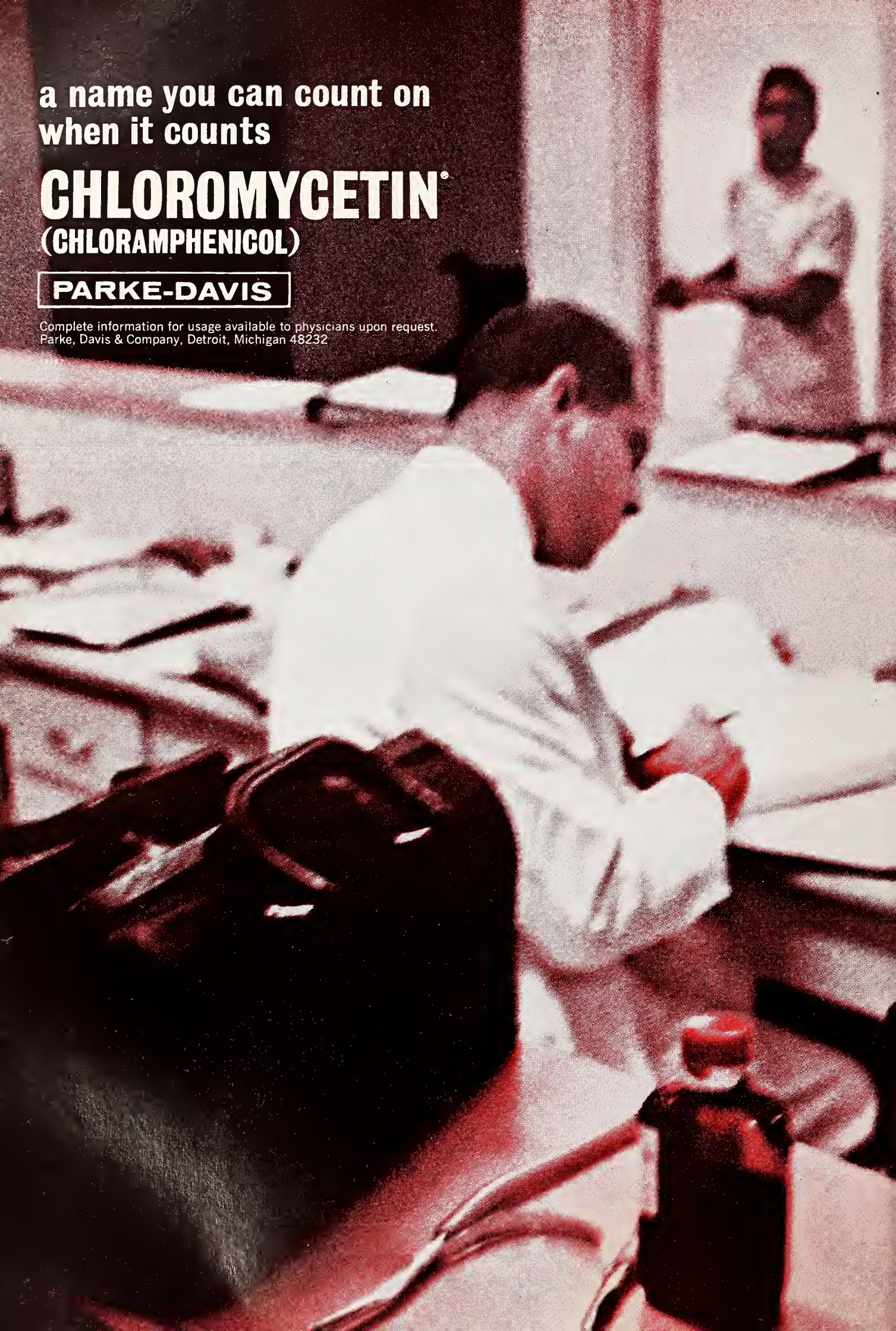
IN THIS ISSUE:

- Combination Therapy for Prostatic Carcinoma —R. H. Flocks, M.D., and Shu-Feng Cheng, M.D.
- The Hazards of Amniocentesis—Raymond G. Burnett, M.D., and William R. Anderson, M.D.
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 491—Headache, Confusion, Abnormal Spinal Fluids



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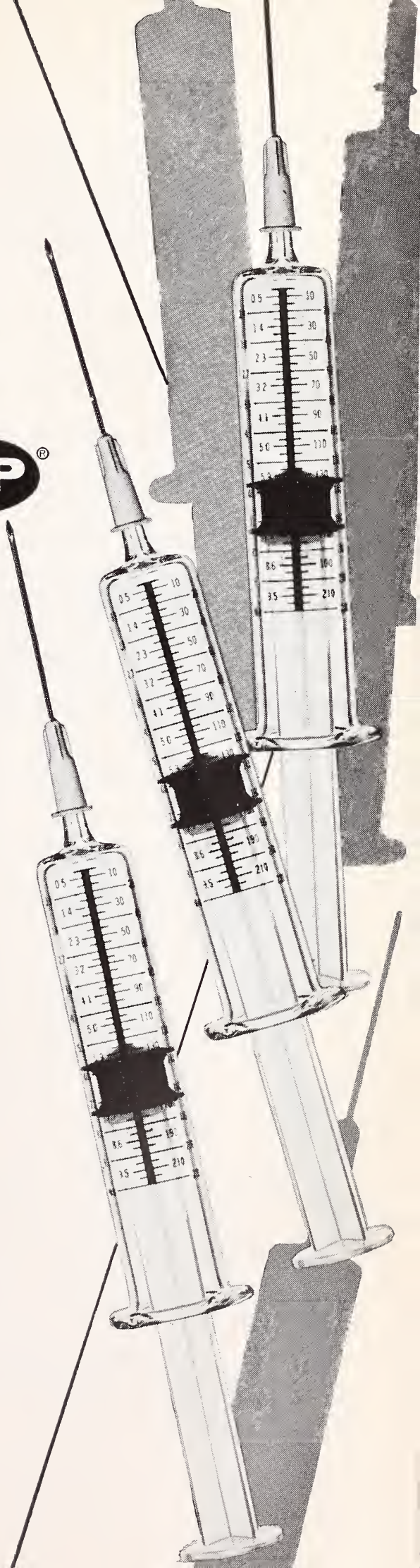

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CONTENTS

SCIENTIFIC ARTICLES

Combination Therapy for Prostatic Carcinoma, With Special Emphasis on the Role of Chemotherapy
R. H. Flocks, M.D., and Shu-Feng Cheng, M.D., Iowa City 125

The Hazards of Aminocentesis
Raymond G. Burnett, M.D., and William R. Anderson, M.D., F.A.C.O.G., Iowa City . . 130

University of Iowa College of Medicine
Clinical Pathologic Conference No. 491 (Headache, Confusion, Abnormal Spinal Fluids) . 138

EDITORIALS

A Nurse's Credo 153

A Permanent Pacemaker Implanted Without a Thoracotomy 153

Diabetes Mellitus in Childhood 154

The Pathogenesis of Pulmonary Tuberculosis in the Elderly 156

The Young and the Happily Not-So-Young . . 160

Medical Absurdities in Mass-Circulated Magazines 160

SPECIAL DEPARTMENTS

Coming Meetings 111

The Month in Washington 114

President's Page 161

Journal Book Shelf 162

In the Public Interest facing page 162

The Doctor's Business 167

Iowa Association of Medical Assistants 173

Woman's Auxiliary News 176

State Department of Health 179

Deaths 188

Personals 189

MISCELLANEOUS

New Pamphlet in "Evaluation of Impairment" Series 116

Leaflet on Sodium-Restricted Diets 117

Staff of Aesculapius and the Staff of Hermes . . 152

U. of I. Riding Mower Accident Study 168

"Why I Said 'Yes,'" Donovan F. Ward, M.D. . . 169

Vitamins B-3 and C Benefit Schizophrenics . . 172

Fresh and Canned Vegetables Have Equal Nutritive Value 188

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COMING MEETINGS

IN STATE

Feb. 9 — **Faculty Training Workshop on Cardiopulmonary Resuscitation, Iowa Heart Association,** U. of I. College of Medicine, Iowa City.

Feb. 13-16 — **Refresher Course for the General Practitioner,** University of Iowa College of Medicine.

CONTINENTAL U. S.

Feb. 2-3 — **American College of Psychiatrists,** Fontainebleau Hotel, New Orleans.

Feb. 3 — **American College of Physicians,** Nebraska Regional Meeting, Omaha.

Feb. 3-4 — **American Academy of Allergy Postgraduate Course on Antigens, Antibodies, Inflammation and Autoimmunity,** Statler Hilton Hotel, Boston.

Feb. 5 — **Closed Chest Cardiac Resuscitation,** University of Nebraska College of Medicine, Omaha.

Feb. 5-9 — **Psychiatry and the Internist,** University of Southern California School of Medicine, Los Angeles.

Feb. 6-10 — **American College of Radiology,** Drake Hotel, Chicago.

Feb. 7-9 — **American Academy of Occupational Medicine,** Marriott Twin Bridges Motel, Washington, D. C.

Feb. 8-10 — **Southwestern Medical Association,** Sheraton-El Paso Motor Inn, El Paso.

Feb. 8-10 — **20th Annual Clinical Conference,** Wills Eye Hospital, Bellevue Stratford Hotel, Philadelphia.

Feb. 8-10 — **Society of University Surgeons,** Americana Hotel, New York.

Feb. 8-13 — **Congress on Medical Education,** Palmer House, Chicago.

Feb. 11-15 — **Medical Society of the State of New York,** Americana Hotel, New York.

Feb. 11-16 — **New Orleans Academy of Ophthalmology,** Roosevelt Hotel, New Orleans.

Feb. 12-16 — **Postgraduate Course in Clinical Application of Cardiopulmonary Physiology sponsored by American College of Chest Physicians,** Ambassador Hotel, Los Angeles.

Feb. 14 — **Symposium on Atherosclerosis and Its Relationship to Carbohydrate Metabolism,** Americana Hotel, New York.

Feb. 19-21 — **1968 Sectional Meeting of American College of Surgeons,** Statler-Hilton Hotel, Dallas.

Feb. 19-23 — **Intensive Care Units,** University of Cincinnati Medical Center and VA Hospital, Cincinnati.

Feb. 20-23 — **Postgraduate Course in Surgery of the Hand,** University of Colorado School of Medicine, Denver.

Feb. 21-25 — **Fifth Annual Postgraduate Diabetes Institute,** Aspen, Colorado.

Feb. 22-23 — **Office Procedures for General Physician,** University of Nebraska College of Medicine, Omaha.

Feb. 22-24 — **Central Surgical Association,** Sheraton-Cleveland, Cleveland.

Feb. 22-24 — **American Academy of Forensic Sciences,** Drake Hotel, Chicago.

Feb. 23-25 — **Semantics and Sexuality,** Three-day Forum and Workshop presented by San Francisco State College Faculty Program Center and the Pacific Medical Center, San Francisco Fairmont Hotel, San Francisco.

Feb. 25-28 — **Chicago Medical Society Annual Clinical Conference,** Palmer House, Chicago.

Feb. 28-Mar. 3 — **American College of Cardiology,** San Francisco Hilton, San Francisco.

March 4-8 — **Postgraduate Course in Diagnosis and Treatment of Cardiovascular and Pulmonary Diseases sponsored by American College of Chest Physicians,** Hotel Fontainebleau, Miami Beach.

March 5 — **Advances in Medical and Nursing Care of Cancer,** University of Nebraska, College of Medicine, Omaha.

March 7-8 — **The Doctor and His Hospital, Institute of Medicine of Chicago,** Pick-Congress Hotel, Chicago.

March 12-14 — **Michigan Academy of General Practice,** Sheraton-Cadillac Hotel, Detroit.

March 14-16 — **Clinical Selection of Patients for Cardiac Surgery,** Mayo Graduate School of Medicine (University of Minnesota) and Mayo Clinic, Rochester.

March 15-16 — **14th Annual AMA Conference of State Mental Health Representatives,** Drake Hotel, Chicago.

March 18-22 — **Psychiatry and the Internist,** Albany Medical College of Union University, Albany.

March 21-22 — **Abnormal Labor and Practical Endocrinology,** University of Nebraska College of Medicine, Omaha.

March 22-23 — **Second National AMA Congress on Socio-Economics of Health Care,** Palmer House, Chicago.

March 24-30 — **American Society of Clinical Pathologists,** Roosevelt Hotel, New Orleans.

March 26-28 — **Indiana Academy of General Practice,** Murat Temple & Marott Hotel, Indianapolis.

March 27-28 — **Third Annual Sports Medicine Conference, sponsored by University of Wisconsin,** University of Wisconsin Campus, Madison.

March 27-30 — **Current Concepts in Physiology of Respiration, Circulation and Electrolyte Metabolism, co-sponsored with American Physiological Society,** Boston.

March 28-29 — **The Crying Child—Medical Emergency,** University of Nebraska College of Medicine, Omaha.

March 29-30 — **21st AMA Conference on Rural Health,** Olympic Hotel, Seattle, Washington.

March 29-31 — **American Society of Internal Medicine,** Statler-Hilton, Boston.

ABROAD

Feb. 7-10 — **Medical Society of the United States and Mexico,** 12th Annual Meeting, Guadalajara, Mexico.

Feb. 28-Mar. 2 — **Hypertensive Cardiovascular Diseases: Mechanism and Treatment,** University of Montreal (Clinical Research Institute of Montreal), Montreal.

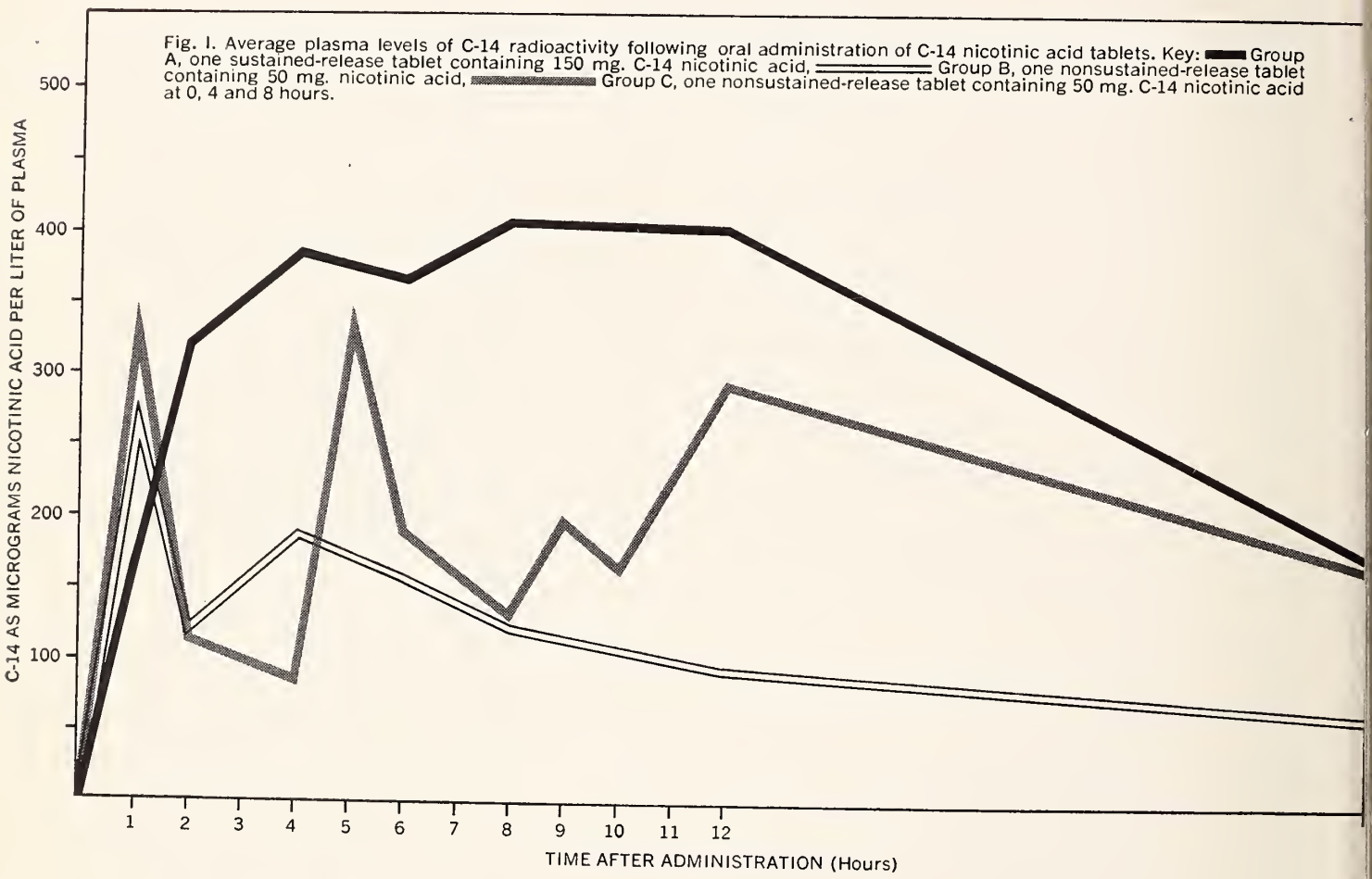
Mar. 25-27 — **American College of Surgeons,** Sectional Meeting, Vancouver, B. C., Canada.

Apr. 21-27 — **Inter-American Congress of Cardiology (8th),** Lima, Peru.

Apr. 28-May 4 — **Inter-American Congress of Atherosclerosis (3rd),** Buenos Aires.

Sustained circulatory, respirato
and cerebral stimulation for th

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.





(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also, cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate, signs of senile confusion. Patients become more alert,

ged and debilitated

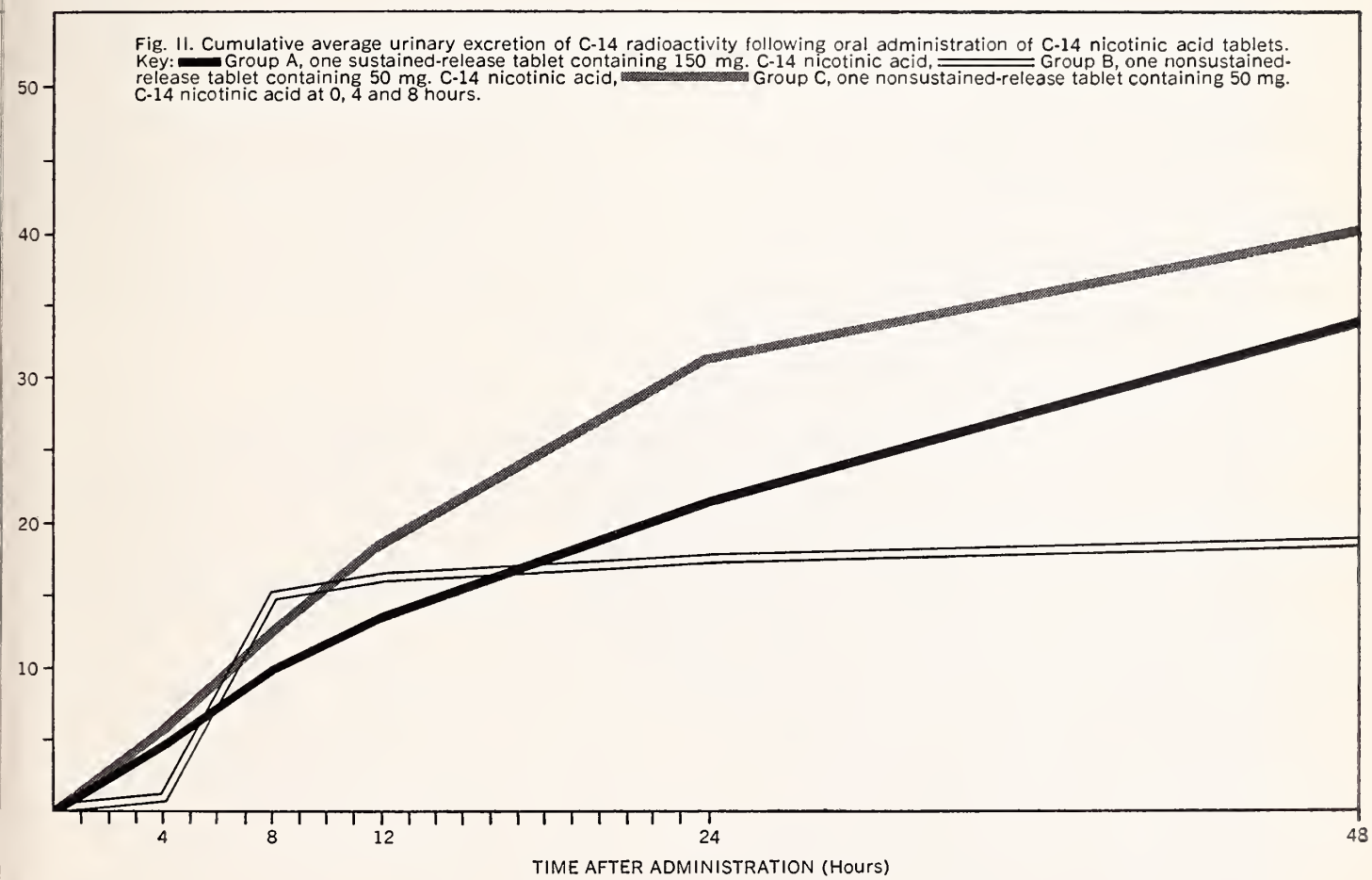


Fig. 11. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ss confused and moody. Personal care, memory, motional stability, social attention improve. Fatigue, pathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will ermit your patients to enjoy the benefits of time-rolonged nicotinic acid/pentylenetetrazol therapy, t an economical price. Dosage is only one tablet every 2 hours.

ontraindications: There are no known contraindications.

recautions: Exercise caution when treating patients ith a low convulsive threshold.

Side Effects: Side effects are rarely encountered however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet



The Month in Washington

Washington, D. C.—President Johnson signed into law the Social Security legislation which included changes in Medicare and Medicaid advocated by the medical profession.

It provides for a record-high minimum 13 per cent increase in cash benefits for 24 million Americans, starting in March. Beginning April 1, one dollar a month of the increase will be withheld from the checks of those participating in voluntary Plan B of Medicare which covers part of physician fees and other medical services other than hospitalization. The total premium for Plan B insurance is now $6 a month, half of which is paid by the federal government. Beginning April 1, the premium will be increased to $8, with the government paying $4 and the participant $4.

According to the Department of Health, Education and Welfare, about 20 cents of the $1 increase was needed to cover costs which were originally underestimated. Another 25 cents would cover the expected increase of use under the program. An anticipated 5 per cent increase in physicians' fees would account for another 25 cents, HEW said.

The Social Security taxable base also was increased, effective January 1, from $6,600 to $7,800. The tax rate for this year will remain the same as under the old law, 4.4 per cent on both the employee and employer and 6.4 per cent on self-employed. Tax rate increases are set for subsequent years through 1987.

MEDICARE CHANGES

—Payment of physician fees is authorized either to the patient on the basis of an itemized bill, either unpaid or receipted as paid, or to the physician under the assignment method.

—Payment is authorized for full reasonable charges for radiologic or other services furnished by physicians to hospital inpatients.

—Hospital outpatient diagnostic services are transferred from the hospital insurance program (Plan A) to the supplementary medical insurance program (Plan B). The change was designed to simplify paying for benefits furnished to hospital outpatients.

—The requirement that a physician must certify the medical necessity for the admission of a beneficiary to a general hospital and for hospital outpatient services was eliminated.

—Medicare beneficiaries are given a lifetime reserve of 60 additional days of hospital care after the 90 days covered in a spell of illness. The beneficiary must pay the first $20 per day for the additional hospitalization.

—The Secretary of HEW was directed to study and report to Congress by January 1, 1969, the effects of covering drugs under Medicare, and of establishing quality and cost standards for drugs provided under Social Security health programs.

—Services of podiatrists are authorized under Medicare to the extent that the state's law permits, but routine foot care is not covered.

—Outpatient services furnished by physical therapists are authorized within certain limitations.

—The Secretary of HEW was directed to study and make recommendations about adding the services of chiropractors and optometrists to Plan B.

—Payment is authorized under plan B for diagnostic x-rays taken in a patient's home or a nursing home.

MEDICAID CHANGES

—States are limited in setting eligibility income levels for federal matching purposes.

—States are given until January 1, 1970, to buy Medicare Plan B insurance for aged Medicaid beneficiaries.

—States are authorized to make direct payments to Medicaid beneficiaries for physicians' and dentists' services if the beneficiary is not receiving cash assistance.

—States are permitted to select either the five basic health services, or seven out of the 14 authorized, for the medically indigent. The basic five must be provided for those receiving welfare cash benefits. The basic five are: inpatient hospital services, outpatient hospital services, other laboratory and x-ray services, skilled nursing-home services and physicians' services.

—States must license administrators of nursing homes and set minimum nursing-home standards if these institutions are to be eligible to participate in the Medicaid program.

—States must establish methods and procedures to safeguard against unnecessary utilization of health-care services and to assure that payments for such services and drugs do not exceed reasonable charges.

Under the program for Aid to Families with Dependent Children (AFDC), the states now must offer birth-control services to appropriate beneficiaries with acceptance on a voluntary basis. Authorizations for federal financial aid to maternal and child health programs are increased. Services of optometrists are added to child-health programs.

REMOVAL OF DRUGS FROM THE MARKET

Dr. James L. Goddard, commissioner of the Food and Drug Administration, estimated that

(Continued on page 116)

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. A brief precautionary statement follows.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal obstruction, or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.
Usage in Pregnancy: Use cautiously, especially in the first trimester. *Note:* The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible side effects of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported but no causal relationship has been established.



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Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride, and 2.5 mg. of isopropamide, as the iodide.

Spansule® Capsules

brand of sustained release capsules

each one can give him all-day or all-night relief of nasal congestion

SK&F Smith Kline & French Laboratories

The Month in Washington

(Continued from page 114)

about 300 drugs, marketed under 1,600 brand names, will be forced off the market because of ineffectiveness in the treatment of medical conditions.

An evaluation of some 3,000 drugs placed on the market from 1938 to 1962 was started in June, 1966. It is being conducted by 29 panels of 200 medical and pharmaceutical specialists under the direction of the National Academy of Sciences-National Research Council. The first panel is to report in January, and the last report was due in mid-1969.

The FDA assigned the evaluation to the Academy following passage of the Kefauver Drug Law in 1962. The law's main thrust was to give the FDA power to pass upon the efficacy as well as the safety of drugs marketed after 1962, but a provision authorized the government to review drugs already on the market.

THE NEWLY-APPROVED MUMPS VACCINE

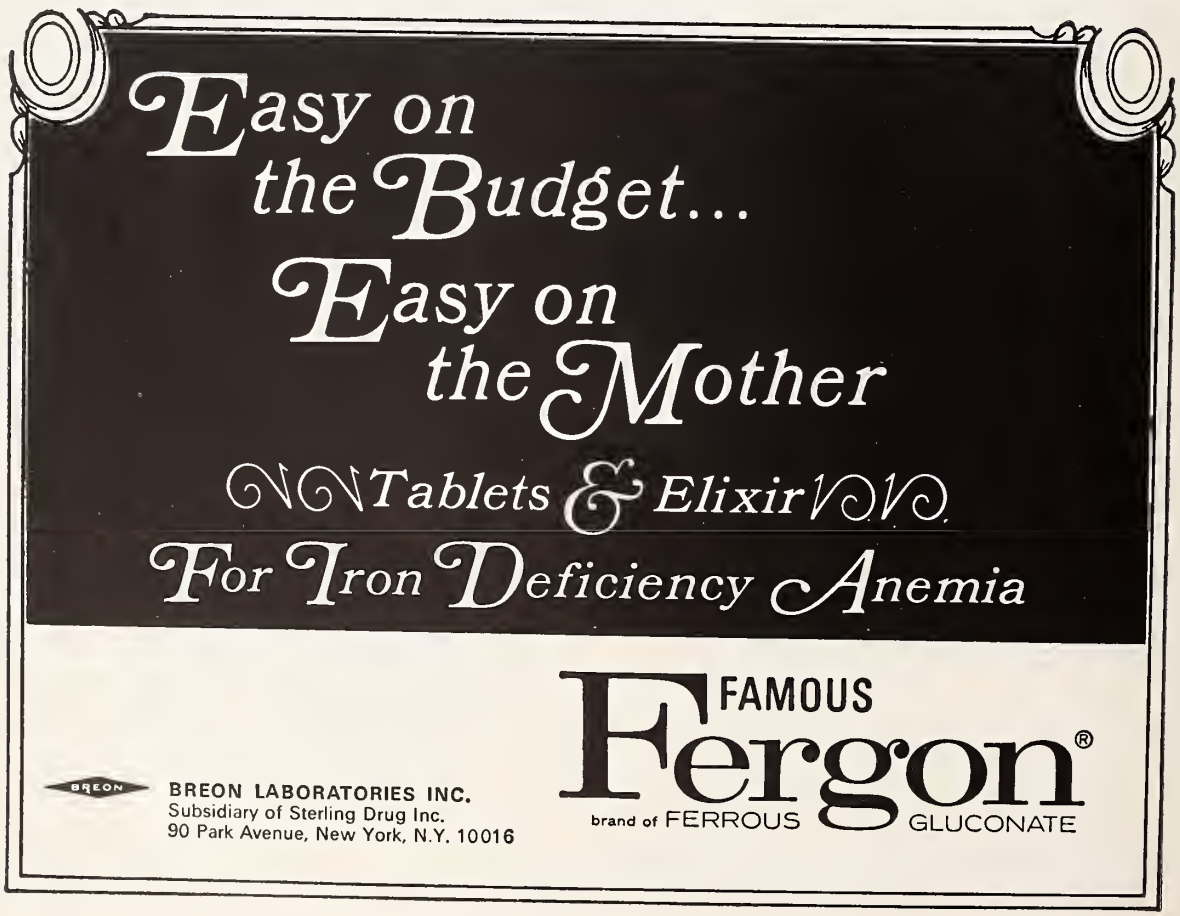
The federal government has licensed a live, attentuated mumps virus vaccine especially recommended for adolescent and adult males who can be made sterile by the relatively innocuous childhood disease.

The vaccine, developed over a five-year period by the Merck, Sharp and Dohme Research Laboratories, was not recommended for routine use in infants and young children pending development of more information on the duration of the immunity it provides. Dr. William H. Stewart, the U.S.P.H.S. surgeon general, said excellent protection against naturally-occurring mumps has been observed for the first year after administration of the single-infection live vaccine. "But limited data on natural exposure during the second year indicate continuing protection although additional observations will be required to determine the duration of immunity protection," he said.

New Pamphlet in "Evaluation of Impairment" Series

The eleventh in the series "Guides to the Evaluation of Permanent Impairment" developed by the AMA Committee on Rating Mental and Physical Impairment is now available in pamphlet form. It is entitled: "The Reproductive and Urinary Systems."

Like all of the others in the series, it has been designed primarily for use by physicians, but it is of interest and use to all concerned with the medical, administrative or judicial aspects of programs for the disabled. The previously published guides deal with the extremities and back; the visual system; the cardiovascular system; ear, nose, throat



and related structures; the central nervous system; the digestive system; the peripheral spinal nerves; the respiratory system; the endocrine system; and mental illness.

The Committee calls attention to the fact that the guide on "The Reproductive and Urinary Systems" was included in a recent issue of JAMA. A limited number of copies of this guide may be obtained, however, without charge, upon written request to the Committee, 535 North Dearborn Street, Chicago 60610.

Leaflet on Sodium-Restricted Diets

A new leaflet based on the booklet, "Your Mild Sodium-Restricted Diet" which the American Heart Association published in 1958, has now been made available to physicians. Like the booklet, the leaflet is available to patients only on a physician's prescription, or to those who already have received the booklet.

The simplified leaflet, entitled "Sodium Restricted Diet—Mild Restriction," contains the same diet but is less detailed than the 48-page booklet from which it was adapted. In addition to the daily diet plan and food lists for 1,800 calories or less, the leaflet contains important information on sources of sodium, and on shopping, cooking, seasonings and eating out. Unfolded, the leaflet becomes a 20 by 10-inch chart for posting in kitchens.

Prepared by the AHA in cooperation with the Heart Disease Control Program, U. S. Public Health Service, and the American Dietetic Association, the leaflet may be obtained by physicians, nurses, dietitians, nutritionists, hospital and nursing home administrators, medical societies and local health departments through Heart Associations in their communities.

Cardiopulmonary Resuscitation

On February 9, in Iowa City, the Iowa Heart Association and the U. of I. College of Medicine will conduct a workshop for the training of instructors in cardiopulmonary resuscitation. Nationally-recognized authorities will participate. Its purpose will be to stimulate physician interest in continued cardiopulmonary-resuscitation training throughout the state in an attempt to save 100 lives that might otherwise be lost in 1968.

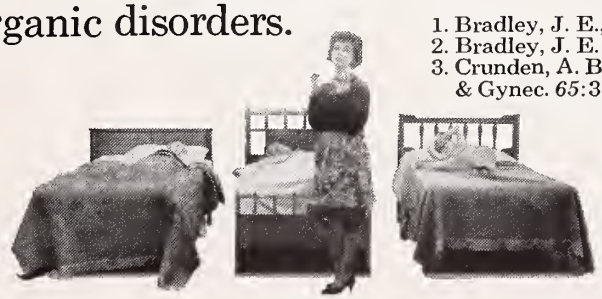
The Heart Association has three versions of a film, "Prescription for Life," that it will lend for showings at local hospitals, and a booklet "Cardiopulmonary Resuscitation—A Manual for Instructors" that it will give to physicians who have the responsibility for training approved personnel in CPR technics. The 48-minute film is intended for physicians, nurses and others qualified to perform CPR. It provides anatomic and physiologic experimental and clinical information covering airway, breathing, circulation and definitive treatment in emergency resuscitation. There are also a 28-minute review version, and a 12-minute highlights version.



Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



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Emetrol®
phosphorated carbohydrate solution
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She doesn't feel she "suffers" from hypertension

Butiserpazide® lowers blood pressure so smoothly that patients are often untroubled by either disease *or* therapy

By switching patients to BUTISERPAZIDE you may be able to free them of much of the burden of hypertension. Clinical comparisons have shown that many respond with (1) smooth, uniform lowering of blood pressure[1]...at times to levels *below* those attained with previous therapy[2]; (2) "striking" improvement in such symptoms as headache, nervousness, palpitation and dizziness[2]; plus (3) "...lowered incidence of drug side effects."[2]

And there's an added advantage: the usual dosage is just 1 tablet once or twice daily, often without need for supplementary therapy. (BUTISERPAZIDE provides not only hypotensive and diuretic action, but a mildly sedative effect as well.) Isn't this the way to take the suffering out of hypertension?

You have a choice of 2 strengths:

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BUTISOL® (butabarbital) 30 mg. (½ gr.)†;
Hydrochlorothiazide 25 mg. (⅜ gr.); Reserpine 0.1 mg.

in mild to moderate cases, often effective at half the usual thiazide or thiazide/reserpine dosage.

Butiserpazide®-50
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controls many moderate to severe cases without any need for ganglionic blockers, or other more potent agents; if such agents are needed, their dosage can be cut in half.

*15 mg. of **Butisol** (butabarbital), plus the other ingredients, in outer layer; 15 mg. of **Butisol** (butabarbital) in a specially coated core for delayed action, to approximately equalize duration of action for all components.

Contraindicated in presence of renal impairment, peptic ulcer, ulcerative colitis, or mental depression, and in patients with porphyria or those sensitive to any component. **Warning:** Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions which have led to obstruction hemorrhage, and perforation. Surgery has been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occur. **Precautions:** Exercise caution in hepatic disease, diabetes, surgery, coronary artery disease, epilepsy, E.S.T., and in patients receiving digitalis. **Side Effects:** Electrolyte imbalance, hyponatremia, hypochloremic alkalosis and/or hypokalemia, hyperuricemia and gout, bradycardia, drowsiness, skin rashes, hangover, systemic disturbances, weakness, leg cramps, diarrhea, epistaxis, dizziness, urticaria, dry itching skin, nausea, vomiting, palpitation, superficial skin bruises, headache, dehydration, paresthesias, photosensitivity, pancreatitis, jaundice, xanthopsia, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, nasal congestion, hypotension, lassitude, loose stools, anorexia, bizarre dreams, peptic ulcer, ulcerative colitis, mental depression. (Ammonium chloride, which may be administered to reverse hypochloremic alkalosis, should not be given to patients with hepatic disease.) **Before prescribing or administering, see package insert.** †**Warning:** May be habit forming. **Usual Adult Dosage:** Butiserpazide®-25 or Butiserpazide®-50: 1 tablet daily or b.i.d. **References:** 1. Johnson, H. J., Jr.: Penna. M. J.: 67:35, 1964. 2. Coodley, E. L.: Curr. Ther. Res. 4:460, 1962.

McNEIL

McNEIL LABORATORIES, INC.,
FORT WASHINGTON, PA.



Tandearil®, oxyphenbutazone, 100 mg. tablets

Indications: Osteoarthritis, rheumatoid arthritis, rheumatoid spondylitis, psoriatic arthritis, gout, painful shoulder (peritendinitis, capsulitis, bursitis and acute arthritis of that joint), acute superficial thrombophlebitis, severe forms of a variety of local inflammatory conditions. (In inflammatory conditions not involving prolonged or fatal disease, use only when severity of condition balances potential toxicity.)
The drug has no significant uricosuric action but is of value only in the treatment of acute gouty arthritis.
Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.
Warning: Tandearil is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with great caution in the first trimester of pregnancy.
Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make regular blood counts. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.
Adverse Reactions: The most common are nausea, edema and drug rash. Swelling of the ankles or face may be minimized by with-

"Pain Break" for an osteoarthritic. Tandearil can ease it.

At 46, her knees still look good on the outside. But inside, there may be the familiar picture of osteoarthritis.



If aspirin doesn't help, Tandearil often will. Pain and stiffness begin to ease up in 3 or 4 days. You can often maintain response with a daily dose of only 1 or 2 tablets.

Of course, Tandearil is not for every osteoarthritic. Select your patients carefully and follow them in line with the Contraindications, Precautions, Warning, and Adverse Reactions listed below.

But for many aspirin-stubborn osteoarthritics, let Tandearil ease the unwelcome pain breaks of osteoarthritis.

Tandearil®
oxyphenbutazone

holding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Mild drug rashes frequently subside with reduction of dosage. However, rash accompanied by fever or other systemic reactions usually requires withholding medication. Purpuric rash has also been reported. Agranulocytosis or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. It is usually unnecessary to exceed 4 tablets daily. A trial period of 1 week is adequate to determine response; in the absence of a favorable response, discontinue. Maintenance: An effective level is often achieved with 1 or 2 tablets daily, do not exceed 4 daily. 6562-VI(B)R2

For complete details, please see full prescribing information.

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New Freedom Shares

Now, when you join the Payroll Savings Plan or the Bond-a-Month Plan, you are eligible to purchase Freedom Shares. Freedom Shares pay 4.74% when held to maturity of just 4½ years (redeemable after one year), are available on a one-for-one basis with Savings Bonds.

U.S. Savings Bonds, new Freedom Shares

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plan to attend:

MARCH 22-23, 1968
THE PALMER HOUSE
CHICAGO, ILLINOIS

2ND NATIONAL CONGRESS ON THE SOCIO-ECONOMICS of HEALTH CARE



Sponsored by the Council on Medical Service and the
Division of Socio-Economic Activities
American Medical Association

Theme: *meeting the increased demand for health services*

Purpose: To signify the medical profession's ongoing concern for the effective organization, delivery and financing of health care services.

To bring together authorities from medicine, health care administration, social science, education, community planning and other disciplines to report on new issues and techniques in this area.

THE CONGRESS WILL EVALUATE IN DEPTH:

- Dimensions of the increasing demand for health services.
- Specific evolving responses to this demand, including:
 The evolution, organizational patterns, and current status of group practice
 Changing roles of the medical and allied health professions
 Growth in comprehensive community, state and regional health service planning
- Long-range effects of increasing demand in terms of costs and financing mechanisms, manpower requirements, the role of organized medicine, and legislative developments.

Pre-registration form—no registration fee

I will attend the Second National Congress on Socio-Economics of Health Care, March 22-23, 1968, Palmer House, Chicago, Illinois. Please send me the final program when available.

Name _____ Title _____

Organization _____

Address _____ City _____ State _____ Zip Code _____

☐ Please send me a hotel reservation card for the Palmer House. (Requests for hotel reservation cards **must be received** by February 23, 1968.)

Mail to:
DIVISION OF SOCIO-ECONOMIC ACTIVITIES
DEPT. OF HEALTH CARE SERVICES
AMERICAN MEDICAL ASSOCIATION
535 N. Dearborn St., Chicago, Ill. 60610



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Scientific Articles

Combination Therapy for Prostatic Carcinoma

With Special Emphasis on the Role of Chemotherapy

R. H. FLOCKS, M.D., and
SHU-FENG CHENG, M.D.
Iowa City

Our armamentarium for the treatment of prostatic cancer consists of surgical ablation of the local lesion through the perineal or the retropubic route; radiation destruction of the local lesion, either interstitial or external; cryosurgical ablation; electrosurgical destruction; surgical correction of the obstruction caused by the cancer; hormonal manipulation consisting essentially of the administration of estrogens; surgical castration; adrenalectomy or hypophysectomy; the administration of cytotoxic substances; and radiation therapy to metastatic lesions. It is quite clear that we do have an extensive armamentarium, and that many of the modalities are not mutually exclusive but actually complement one another in their therapeutic actions. It is our purpose to discuss the utilization of one or more of them in the therapy of prostatic cancer in its various clinical manifestations.

Jewett[1] and Barnes[2] showed that an isolated prostatic nodule must be removed if biopsy reveals it to be prostatic cancer. At the present time the most satisfactory technics for the ablation of such a nodule is surgical removal through either the perineal or the retropubic route, or surgical excision of the nodule itself and interstitial irradiation of the residual prostatic tissue with Au^{198}. All three of these are quite satisfactory. It has been shown that in approximately 10 per cent of these patients there will be either regional lymph node involvement, vascular involvement as demonstrated by positive bone-marrow studies, or a combination of the two (Table 1). In these

TABLE 1

AREAS OF INVOLVEMENT AND INCIDENCES

A. Local lesion limited to prostate, incidence 5% to 20%	
1) Negative node or negative marrow dissemination	90% of A
2) Positive nodes, negative marrow	8% of A
3) Negative nodes, positive marrow	2% of A
4) Positive nodes, positive marrow	?% of A
B. Local lesion, extraprostatic invasion present, incidence 80% to 95%	
1) Negative node or negative marrow dissemination	20% of B
2) Positive nodes, negative marrow	20% of B
3) Negative nodes, positive marrow	?% of B
4) Positive nodes, positive marrow	50% of B

cases, of course, ablation of the nodule itself will not lead to the total destruction of the lesion, but it may well alter its life history in that there will be fewer tumor cells present to produce continuing dissemination.

What should be done in the way of combination therapy or supplemental therapy to combat a dissemination that may not be clinically evident? There are several alternatives. One is to change the patient's hormonal balance either temporarily or permanently, with the idea of slowing down or altering the life history of any tumor cells which may have disseminated from the local area. There is a great deal of controversy with regard to this problem, particularly because of the recent studies of the Veterans' Group[3] which seems to indicate that estrogen therapy and hormonal manipulation have a mortality of their own, and that in the presence of very early prostatic cancer in which the incidence of dissemination is very low, the five-year survival would be so markedly worsened as to contraindicate estrogen therapy for those lesions.

Are there other modalities which might be utilized in dealing with the disseminated cells? There is considerable evidence that chemotherapy, particularly with alkylating agents, has a significant effect upon prostatic cancer. Some of this evidence will be discussed below. It has been shown in experimentally produced disease that the possibilities of altering the life history of cancer satisfactorily are definitely related to the total number of cancer cells that are growing in the animal. Therefore, in the presence of local spread it would seem wise to institute further therapy, even though no dissemination can be demonstrated by clinical means. Chemotherapy would seem to be one of the useful technics.

When there is local spread, producing invasion of the extraprostatic tissues, there is a very high incidence of local recurrence following simple surgical excision. The figure is approximately 25 per cent (Table 2). Local combination therapy—surgical excision of the main mass of the tumor and either interstitial or externally applied irradiation—is associated with a very definite reduction in the incidence of local recurrence. In a recent review of our own cases, the incidence was approximately 5 per cent (Table 2). It has also been shown

TABLE 2

INCIDENCE OF LOCAL RECURRENCE FOLLOWING SURGICAL REMOVAL OF PROSTATIC CANCER IN PATIENTS HAVING EXTRAPROSTATIC DISEASE OF SMALL EXTENT AND FOLLOWED FIVE YEARS OR MORE

	Total No. of Patients	No. With Local Recurrence
Belt	34	8
Scott	29	7
Whitmore and Mackenzie	28	8
Flocks	74*	4

* Solution of Au^{198} locally instilled as an adjuvant.

by Arduino,[4] Whitmore,[5] ourselves and others that in the presence of extraprostatic spread, there is a significant rise in the incidence of dissemination to the regional lymph nodes and to the vascular bed in the bones (Table 3). It rises from about 10 per cent in the prostatic nodule to approximately 60 per cent when there has been extraprostatic spread. This seems in some way related to the size of the local lesion. In such cases, therefore, combination therapy appears indicated for the ablation of the local lesion, and supplemental therapy seems indicated for the disseminated tumor.

Although hormonal manipulation has been utilized for many years, there is still considerable difference of opinion as to the way in which such hormonal manipulation should be carried out in the individual patient. The older studies of Nesbit and Baum[7] suggest that castration plus estrogen therapy should be performed immediately. However some of the older series such as ours[8] (Table 4) seem to indicate that better survivals are obtained by withholding estrogen therapy until the patient begins to have pain and marked dissemination. A report of 1,100 cases from the Mayo Clinic by Emmett *et al.*[9] also seems to indicate that in the presence of nodules, at least, estrogen

TABLE 3

RELATIONSHIP OF LYMPH-NODE INVOLVEMENT TO LOCAL LESION IN PROSTATIC CANCER

Reference	Limited to Prostate	Lymph Nodes Positive	Extra-Prostatic Invasion	Lymph Nodes Involved
Whitmore and Mackenzie	2	0	18	9
Arduino and Glucksman	54	5	17	14
Flocks, Culp and Porto	29	2	384	146

TABLE 4

RESULTS FOLLOWING FIVE OR MORE YEARS OF FOLLOWUP, ENDING JULY 1, 1965, IN A SERIES OF 854 PATIENTS WITH CARCINOMA OF THE PROSTATE

Treatment	Total Cases	Number of 5 Yr. Survivals	% of 5 Yr. Survivals	% With Later Treatment	Average Survival (Years)	Average Age
TUR only	335	41	12.2	20.6	2.22	72.1
TUR with stilbestrol later	79	34	43.0	44.4	4.52	70.5
TUR and immediate x-ray	42	1	2.4	14.3	1.26	67.8
TUR, x-ray, stilbestrol later	2	0	0	0	2.48	61.5
Palliative x-ray	20	3	15.0	15.0	2.17	65.5
Stilbestrol first	64	13	20.0	34.4 (TUR)	2.69	69.9
TUR, stilbestrol initially	256	59	23.0	11.3	2.63	72.5
No treatment at UI	53	0	0	1 (S-P)	——	——
X-ray and later stilbestrol	3	0	0	0	2.50	——
Totals	854	151	17.68	19.67	2.54	

therapy is contraindicated, but when clinical cancer is present, estrogen therapy and orchiectomy appear to have value. The recent Veterans' Prospective Study suggests that estrogen therapy should be kept as a very last resort, and little information in that study is related to orchiectomy. Certainly estrogen therapy should not be given early in the disease, for it has a mortality rate of its own, as was indicated previously.

When marked dissemination occurs, of course, all modalities should be utilized that are necessary to make the patient as comfortable as possible and to prolong the life history of the cancer. In such instances, transurethral resection or prostatectomy to relieve obstruction to the outlet of the bladder, reimplantation of the ureters to relieve obstruction in the lower portions of the ureters, subtotal prostatectomy and total cystectomy—all of these have been carried out as palliative measures. In addition, external irradiation to areas of metastasis and to the local lesion have also been helpful. It can be combined with the indicated surgical maneuvers.

Castration, estrogen therapy, adrenalectomy and hypophysectomy have all been utilized alone or in combination to alter the hormonal environment of the lesion and thus to produce definite periods of remission and improvement in the patient. None of them, however, has been curative, except possibly in very rare, isolated instances. In this regard the report of Sharkey and Fisher[10] with regard to the occurrence of prostatic cancer in a eunuch lacking testicular tissue is of interest.

TABLE 5

CANCERS CLASSIFIED FROM THE POINT OF VIEW OF GROSS PATHOLOGY AS ASCERTAINED CLINICALLY

Stage 0—a small lesion entirely within the prostate (operable)	2%
Stage I—a larger lesion within the prostate, but invading the capsule and adjacent seminal vesicle area	34%
Stage II—a large lesion but apparently localized to the genital fascia and base of the bladder	44%
Stage III—definite metastatic lesions present in the bony or soft tissues	20%

As has been said, on theoretical grounds chemotherapy may be extremely useful as adjuvant therapy in all forms of prostatic cancer. In the early situations—Stage 0 or Stage 1 (Table 5)—where there is simply a nodule or where there has been only a very slight invasion of the periprostatic tissues, with very slight evidence of dissemination, or dissemination that is not clinically evident, we have a situation that is similar to the experimental one in which there are just a small number of cells that need to be destroyed by the chemotherapeutic agent. In the more extensive lesions we have large numbers of cells—possibly too many to be completely destroyed. But certainly eliminating some of them will alter the life history of the lesion and slow it down.

Relatively speaking, there has been little work done on the chemotherapy of prostatic cancer. There is some evidence, however, that

prostatic cancer is sensitive to alkylating agents. In two instances where selective catheterization of the abdominal aorta permitted us to give significant doses of nitrogen mustard intra-arterially, and thus, relatively speaking, to perfuse the prostate and compare biopsies taken from the lesion before and after such therapy, there was evidence that the prostatic tumor had been severely injured by the alkylating agents in the dosages used. Twelve patients who had markedly disseminated lesions and who were given small doses of nitrogen mustard experienced definite improvement in their subjective symptoms (Table 6). Pain disappeared and remission occurred in 50 per cent of the cases. The relief was of short duration, and in that particular group the treatment was not continued for fear of side reactions. In a series of patients on whom Fox[11] utilized Cytoxan in a continuous method of treatment, there was evidence of remission in all the cases of prostatic cancer, and he reported finding evidence of marked fibrosis of the prostatic tumor in the one patient from whom tissue was obtained following such therapy. In a series of patients reported by Weyrauch,[12] significant remissions were also obtained in four cases by means of local injections of thio-tepa intermittently, at monthly intervals.

It is our purpose, here, to emphasize two things with regard to chemotherapy that have been brought to light as a result of the experimental work of Skipper,[13, 14] and Merkle, Stuart and Gofman.[15] First, the efficacy of a cytotoxic agent in cancer therapy is definitely related to the numbers of cells that must be destroyed. When the number becomes too large for the particular chemotherapeutic agent, destruction of the lesion is impossible. The second fundamental principle is that one must study the relationships between the doubling-time or rate of growth of the tumor cells, and the rate of growth of the normal cells which may also be injured or destroyed by the cytotoxic agent. Then the dosage and the timing must be such as to produce the most significant effect upon the tumor and the least possible effect upon the normal tissues. In our study of 12 patients treated during the past 18 months with nitrogen mustard as an alkylating agent, combined with 5FU, we found that intermittent therapy produced subjective improvement in 11 of 12 cases. Objectively, acid phosphatase reduction occurred in all five of those who had elevated serum levels of acid phosphatase. Microscopic improvement was visualized in one patient from whom pre- and post-treatment biopsies were obtained (Table 6).

TABLE 6

ADVANCED PROSTATIC CANCER TREATED WITH NITROGEN MUSTARD AND 5FU INTERMITTENTLY*

Total Cases in Study—12	
Serum Acid Phosphatase	Elevated— 5
	Improved— 5
Serum Alkaline Phosphatase	Elevated— 5
	Improved— 3
Symptoms—Pain, et cetera	In all cases—12
	Improved—11
Histology (studied post-treatment in one case)	Marked tissue change

* Dose—NH_2—20 mg IV
5FU—15 mg/kg IV
Timing—every five weeks

The significant factors underlying the therapy were that the rate of doubling—i.e., the rate of growth of prostatic cancer—was markedly slower, and that the doubling time was markedly longer in prostatic cancer as compared to the rate of growth and doubling time of the bone marrow, which is the tissue injured by the alkylating agent. Thus it was possible for us, by spacing the doses about five weeks apart, to administer a large dose* every five weeks, and to secure a massive reaction in the bone marrow, to produce a significant reaction in the tumor, and then to enable the bone marrow to replace itself and return to normal. (These required about three weeks.) The marrow was then in a normal state at the time the second dose of nitrogen mustard and 5FU was administered.

It should be emphasized that total destruction was never obtained, but a significant number of tumor cells were always destroyed, as were bone-marrow cells. However, the bone marrow replaced itself before the tumor cells had a chance to replace themselves. By this technic we were able to obtain remissions of over a year in some cases. The patients gen-

* 20 mg. NH_2 intravenously, and 15 mg./Kg. 5FU intravenously.

erally did quite well. They simply received their large doses of nitrogen mustard and went home after the resultant leukopenia. Sometimes the WBC count fell to levels of 100 or 200 cells per cu. mm., but it returned to more normal levels in one or two weeks. Our schedule permitted us to continue therapy without getting the very marked side effects that would have occurred if we had given the doses on a more continuous basis. The cytotoxic influence on the marrow would have overshadowed the effect upon the tumor, and would have made us halt our therapy (Figure 1).

In summary, then, it should be emphasized that we have a goodly number of therapeutic modalities that are efficacious in their respective ways in the management of patients with prostatic cancer. Combination therapy, particularly irradiation and surgery, are useful in the destruction and ablation of nodules and of early, relatively small prostatic cancers with minimal extraprostatic spread. In the presence of more extensive lesions, combination therapy seems useful for relief from the results of the tumor, as well as in attempts to destroy the lesion. It must be pointed out, however, that a great deal of further investigation is necessary if we are clearly to delineate the place and timing of alterations of hormonal environment in the presence of prostatic cancer. Our studies of the chemotherapy of prostatic cancer have shown that alkylating agents can be useful, and with our technic an effective dosage can be given without the occurrence of demonstrable and irreversible hematologic changes. There must be some further investigation of other agents and technics of administering them if we are to ascertain more clearly the possibilities of chemotherapy for prostatic cancer.

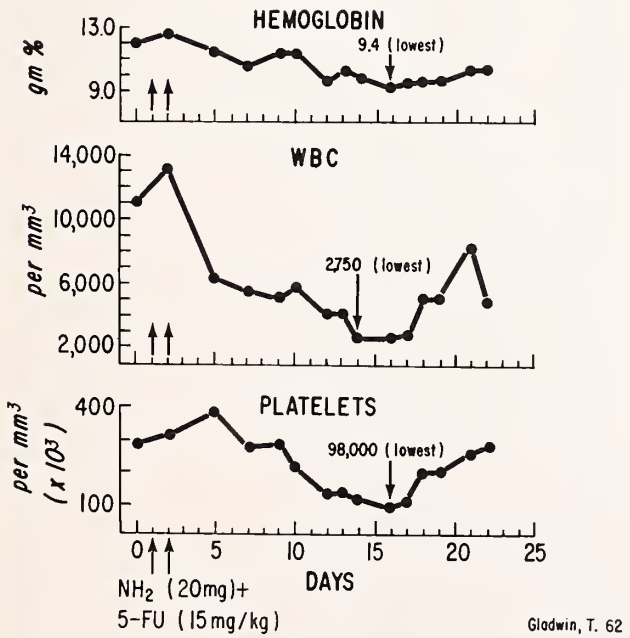


Figure 1. Adenocarcinoma of prostrate with extensive bony involvement.

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The Hazards of Amniocentesis

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MENEES *et al.*[41] described the technique of amniocentesis and advocated its use as a diagnostic aid (amniography) in 1930. It has been used far more frequently since its introduction by Bevis[5-8] and its practical clinical application by Liley,[30-31] for the evaluation of Rh incompatibility.

The possible complications of amniocentesis were pointed out by the early users of the technic. Cornell and Case, in 1934, were greatly concerned about inadvertent puncture of the placental fetal vessels, and after several "close calls" they made the statement, "What would happen if the fetal vessel or vessels were punctured is left to the reader's imagination." With the rapid expansion in the use of amniocentesis during recent years, most investigators have remained in agreement concerning the potential complications, but in practice the procedure has proved relatively safe for mother and fetus. The resultant change in attitude is well illustrated by comparing two editorial comments in OBSTETRIC AND GYNECOLOGIC SURVEY. Regarding Bevis's use of amniocentesis in evaluating fetal Rh involvement, the editor declared, "I doubt the safety, despite the author's assurances."[18] About Liley's work, however, the editor later confessed, "Subsequent experience with this technique, amniocentesis, in hundreds of uterine punctures carried out at the Johns Hopkins Hospital together with many more hundreds reported in the literature has shown that my fears were without basis and that my derogatory comments were unjustified."[19]

The University of Iowa Hospitals constitute a statewide referral center where many Rh-sensitized patients are seen each year in the obstetric clinic. With the acceptance of Liley's work,[30-33] amniocentesis has been utilized frequently in the management of Rh-sensitized-pregnancies. Many amniocenteses have been reported in the literature, and there have been few reports of serious maternal or fetal complications. Yet the cases we are reporting have brought into sharp focus the serious hazards of amniocentesis.

TECHNIQUE

The patient is requested to void prior to amniocentesis. The abdomen is prepared with tincture of benzalkonium. The puncture site is chosen one to two inches below the umbilicus to the right or the left of the midline and on the side of the fetal limbs. When the fluid accumulation between the fetal limbs is not available because the fetal back is anterior, the area about the fetal neck is utilized. A small amount of local anesthetic is injected at the proposed puncture site. Using an 18 or 20 gauge, 3½-inch spinal needle, one traverses the abdominal wall, keeping the needle at right angles to the uterine wall. When it appears that the uterine cavity has been entered, the stylet is removed. Usually amniotic fluid will appear at the needle hub. In the past, if blood was obtained and did not clear after free flow had been allowed for 15 to 30 seconds, the stylet was replaced and the needle advanced. At present, if no fluid is obtained or if the flow remains bloody, the needle is removed and a different site is selected.

Fetal heart tones are checked regularly for two to three hours after the procedure. Then, if the vital signs and fetal heart tones remain stable and there are no untoward symptoms, the patient is discharged.

CASE REPORTS

The first case to be reported represents a complication directly related to the technic of amniocentesis. The second and third cases represent complications having several possible etiologic factors.

Case No. 1. M. N. was a 27-year-old Gravida V, Para IV whose expected date of confinement was April 4, 1966. She was Rh-negative and had been sensitized during her previous pregnancies. Her first three pregnancies were conceived with her first husband. The infant of the second pregnancy had mild erythroblastosis fetalis, and required a simple transfusion. The infant of the third pregnancy was also mildly affected with erythroblastosis fetalis, but did not receive any transfusions. The patient's fourth pregnancy was conceived with her second husband. That infant did not require any exchange transfusions. Blood type, Rh and direct-Coombs' results were not available. The current pregnancy was conceived with a third partner who was not available for blood studies.

The patient was first seen for this pregnancy on January 27, 1966, at which time laboratory tests revealed her to be blood group A, Rh-negative, and to have a positive anti-D titer of 1:8. On February 1, 1966, an amniocentesis was performed in the usual manner, and fluid was obtained without difficulty from a site just to the left of the umbilicus. Spectrophotometric analysis of the amniotic fluid revealed it to lie at the junction of Zone I and Zone II (Liley).

The patient was next seen at our hospital on February 23, 1966, at which time an indirect Coombs' test was positive with an anti-D titer of 1:64. A second amniocentesis was performed on the following day. The site was just to the left of the umbilicus, once more. On that occasion the tap was initially bloody, but it then cleared. Spectrophotometric analysis of the amniotic fluid from the second tap revealed it to be in Zone I (Liley).

The patient then returned on March 15, 1966, at which time a third amniocentesis was attempted. A total of five attempts were made. Two were at sites to the left of the umbilicus and were bloody. Two located in the midline below the umbilicus were negative for blood and fluid, and one located to the right of the umbilicus was again negative for blood and fluid. No further attempts were made. Monitoring of the fetal heart tones immediately after the last attempt revealed a decreased rate of 80 beats per minute. However, within two or three minutes the fetal heart tones returned to a rate of 140 and remained stable. Fetal heart tones on the following morning were 140 and regular. The patient, in retrospect, stated that on the afternoon of the day following the last attempt at amniocentesis, fetal movements were markedly diminished.

She was next seen for her routine antepartum check on March 23, 1966. Examination of the abdomen failed to reveal fetal heart tones. A presumptive diagnosis of intrauterine fetal death was made. X-ray views of the uterus were obtained, and they showed a positive Spalding's sign as well as air in the fetal vascular system. Clotting studies were normal.

On March 25, 1966, the patient was electively induced with intravenous Syntocinon. After a total labor of three hours and 28 minutes, a macerated 2,950 Gm. male infant was spontaneously delivered. Fetal membranes were ruptured prior to delivery, and the amniotic fluid was found to be dark red in color and to contain a large amount of old blood. Examination of the infant failed to reveal any evidence of fetal punctures. Examination of the placenta revealed a 5 cm. ecchymotic area over the fetal surface of the placenta originating from one of the fetal veins near the insertion of the umbilical cord (Figure 1). Careful examination revealed that there were two needle puncture sites very close to the insertion of the cord, and one perforated directly through a fetal vein. It is our opinion that a fetal vein had been punctured at the time of the last aminocentesis, and that the infant exsanguinated into the amniotic cavity.

Autopsy revealed a grossly normal infant without evidence of erythroblastosis. (The pathologist remarked upon the noticeable absence of blood in the fetal vascular system.) Serologic tests were attempted on the amniotic fluid, but no definite conclusion could be reached as to whether there was maternal or fetal blood in the fluid.

Case No. 2. Mrs. J. S. was a 22-year-old

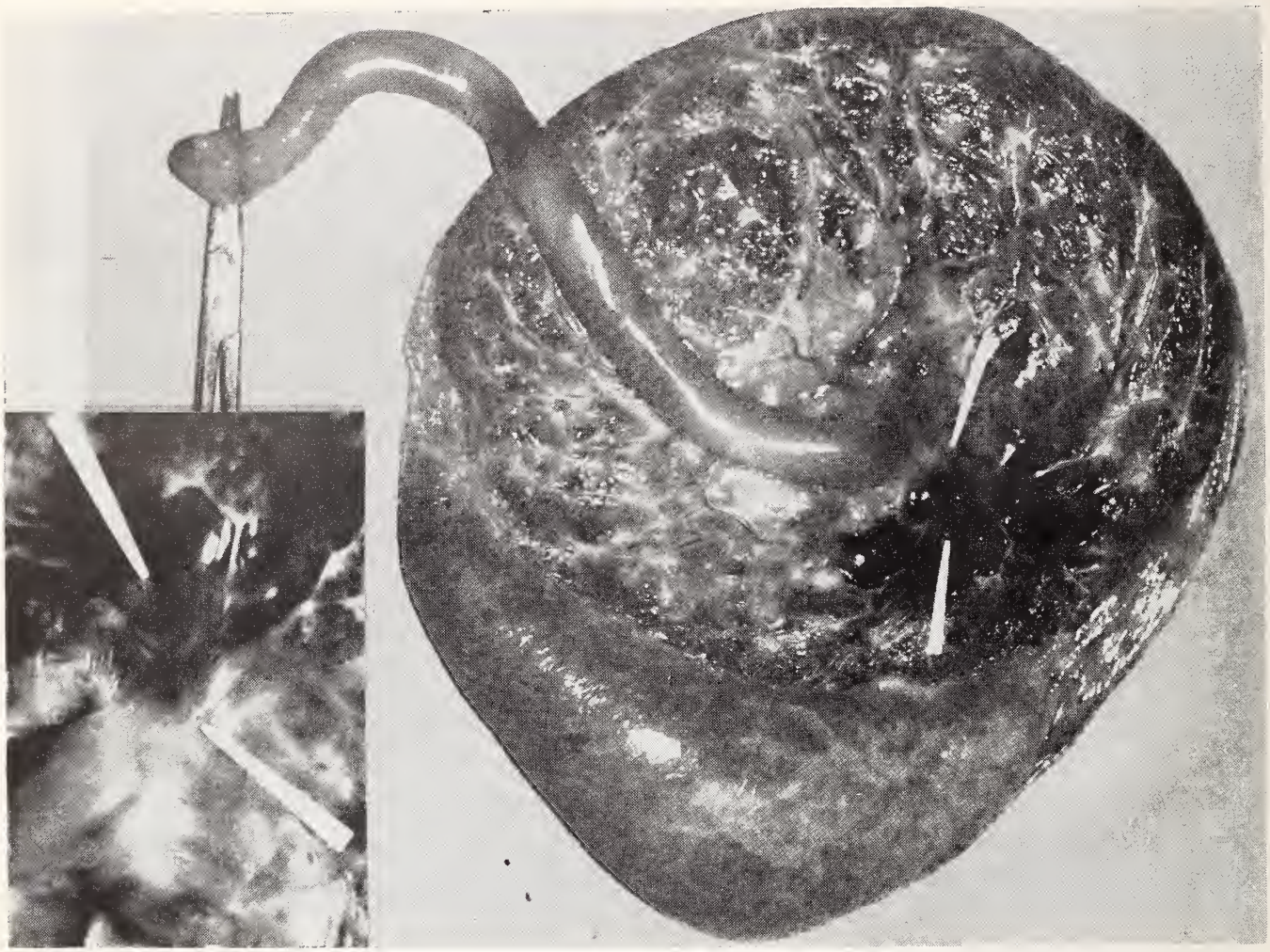


Figure 1. Arrow indicates puncture sites on chorionic plate.

Gravida IV, Para III, Abortus 0 with no previous obstetric complications. At 33-34 weeks' gestation the acute onset of hydramnios was noted, with a fundal height of 46 cm. and an abdominal girth of 98 cm. The cervix was 5 cm. dilated. X-ray showed a single anencephalic infant. Amniocentesis was utilized for the introduction of radio-opaque dye to check for fetal ability to swallow and for patient comfort. Successful amniocentesis was performed 5 cm. below the the umbilicus, in the midline, after several unsuccessful attempts, and 5,000 ml. of amniotic fluid were removed in a two-hour period. Grossly bloody fluid was noted five minutes after initially clear amniotic fluid was obtained. Because of increasing uterine irritability and patient discomfort, vaginal amniotomy was performed, and delivery of a 1,330 Gm. stillborn anencephalic infant was accomplished. The placenta showed no evidence of premature separation. Two distinct puncture holes were noted on the fetal surface of the placenta, no large fetal vessels were punctured.

Case No. 3. Mrs. H. G. was a 36-year-old mentally-retarded Gravida VI, Para III, Abortus II. The current pregnancy had been uncomplicated prior to 30 weeks' gestation. Increased abdominal size was then noted, with associated shortness of breath and lower-extremity edema. On examination, the fundal height was 44 cm., and the abdominal girth was 97 cm. A diagnosis of acute hydramnios was made. Therapy consisted of bed rest and diuretics. Labor started one week later, and a primary inertia pattern was noted. Abdominal amniocentesis was utilized because of a high presenting part. A No. 13 Silverman needle was used just below the umbilicus in the midline. Initially blood was obtained, but when the needle had been advanced, clear amniotic fluid returned.

A total of 4,350 ml. of amniotic fluid was removed during a 38-minute period. During the removal of the last 2,000 ml., an increasing amount of blood was noted. The fetal heart tones and maternal vital signs were stable. Artificial rupture of the fetal membranes was carried out vaginally. Delivery of a 2,235 Gm. infant with gross signs of mongolism rapidly ensued. The infant died six hours postpartum, in respiratory distress. Autopsy was refused. Examination of the placenta revealed a puncture hole through the placenta at the site of a placental separation which approximated 25 per cent of the surface area.

DISCUSSION

Reports documenting a total of over 8,000 amniocenteses are listed in Table 1. That large collected series attests to the rarity of complications, yet the potential morbidity and mortality have been reiterated by most authors who have reported on this subject.

MATERNAL MORTALITY

H. C. Hesseltine, in commenting on a paper by Beecham *et al.*, stated that he had had a mother and fetus die from infection following amniocentesis. Williams and Stallworthy said they had personal knowledge of a patient who died from complications following formation of a uterine hematoma at the puncture site, after amniocentesis. We found no other reports of maternal mortality in the literature.

MATERNAL MORBIDITY

Liley[30] reported that in 200 attempted amniocenteses, he had only two clinically significant complications. The patients developed amnionitis five and seven days after amniocentesis, and the presenting symptoms were fever, lower abdominal pain and a hypertonic painful uterus. The mothers responded rapidly to antibiotics, but the fetuses died. Westberg and Margolis also reported a case of amnionitis in a series of 166 amniocenteses. Both mother and child survived. Fairweather and Walker have reported three cases of pyrexia occurring from one-half to two hours after amniocentesis, lasting two hours, and then spontaneously subsiding without evidence of amnionitis or other focus of infection.

Liley[30] has also reported maternal hemorrhagic complications associated with amniocentesis. Four patients had documented perforation of uterine arteries or veins, with hemorrhage. The most severe effect was peritonism of three days' duration. Two additional patients had leakage of amniotic fluid or blood into the peritoneal cavity, with resultant symptoms of peritonitis. One tap led to the development of a small extraperitoneal hematoma, with local tenderness.

Accidental perforation of bowel or bladder, especially in patients with previous abdominal surgery and subsequent adhesions, has not been reported. MacKay reports a case of abdominal-wall emphysema of no serious consequence. Sjostedt *et al.* and Parrish *et al.* reported acute abdominal pain of short duration after amniocentesis.

FETAL MORTALITY

Amniocentesis appears to be a greater threat to the fetus than to the mother. Kerr and MacKay reported three infant deaths after amniography. However the direct cause of death was said to have been the contrast material (strontium iodide) injected into the amniotic sac. Liley,[30] as noted above, presented two well-documented cases of fetal death secondary to amnionitis. The symptoms and signs of infection developed five and seven days post-amniocentesis. In spite of aggressive antibiotic therapy, the first infant died 35 minutes after delivery, and the other infant was stillborn 24 hours after the mother's admission. As previously mentioned, Hesseltine[4] reported a case in which both mother and fetus succumbed to fulminating post-amniocentesis infection.

MacKay, in reporting 223 amniocenteses, wrote of two cases of fetal death secondary to abruptio placentae, following amniocentesis. He questioned whether the tap had been the direct cause, since the frequency of placental abruption is no greater than the estimated frequency of all Rh-sensitized patients.[62] Mayer also attributed a fetal death to probable placental separation after amniocentesis. Menees *et al.* reported the loss of a six months' gestation by placental abruption 30 hours after amniography. Again, a definite cause-and-effect relationship was not proved.

The adverse effect of rapid decompression of the uterus in hydramnios, as illustrated in our

TABLE I

PREVIOUS STUDIES UTILIZING AMNIOCENTESIS

Author		No. of Amniocenteses	Per Cent Successful Amniocenteses	Complications
Dieckmann & Davis	1933	25	—	None
Kerr & MacKay	1933	20	100	3 fetal deaths following amniography
Rivett	1933	50	—	None
Cornell & Case	1934	6	100	None
Burke	1935	75	—	None
Bevis	1952	158	—	None
Bevis	1953	205	—	None
Savignac	1953	9	—	None
Bevis	1956	71	—	1 abortion two days post amniocentesis
Walker	1957	134	—	None
Parrish et al.	1958	50	92	1 abdominal pain
Sjostedt et al.	1958	45	—	1 abdominal pain
Browne[44]	1960	250	—	None
Cary	1960	89	—	None
Liley[30]	1960	200	92	2 fetal deaths secondary to chorioamnionitis
Liley[31]	1961	101	—	None
MacBeth & Robertson	1961	46	100	None
MacKay	1961	223	—	2 fetal deaths secondary to abruptio placentae
Mayer	1961	253	—	1 fetal death probable abruptio placentae
Wild	1961	119	—	None
Beecham et al.	1962	11	—	None
Goodlin & Schwartz	1962	240	—	1 perinatal death secondary to amniocentesis
Misenhimer	1962	29	—	None
Walker & Jennison	1962	500	95	None
Barton & Stander	1963	125	—	None
Fairweather et al.[20]	1963	145	—	None
McGaughey et al.	1963	200	—	None
Reddin & Brown	1963	40	—	None
Zipursky et al.	1963	13	69	10-50 ml. feto-maternal transfusions
Alvey	1964	700	99	None
Fairweather & Walker	1964	187	91	None
Robertson[50, 51]	1964	252	—	1 fetal death after bloody tap
Lewis et al.	1964	78	—	1 questionable abruption
McLain	1964	75	—	None
Walker et al.[58]	1964	217	—	None
Bowman & Pollock	1965	402	—	None
Cherry	1965	75	—	None
Crosby & Merrill	1965	42	—	None
Freda	1965	900	92	None
Mann et al.	1965	100	100	None
Queenan & Adams[47]	1965	74	95	None
Westberg & Margolis	1965	166	—	1 amnionitis without sequelae
Charles & Jacoby	1966	25	—	None
Mandelbaum & Evans	1966	1,500	—	None
Schwartz et al.	1966	75	—	None
		8,300		

cases No. 2 and No. 3, has been discussed by Hammond. In a discussion of 100 cases of hydramnios, Barry reemphasized the problem of accidental hemorrhage secondary to the sudden release of fluid. He further pointed out the occurrence of maternal shock and sudden death after a rapid release of amniotic fluid in cases of hydramnios.

Robertson[50] mentions an intrauterine death that occurred after a bloody tap, but does not make any statement as to the etiology. Misenhimer[43] has recently reported two cases of feto-maternal hemorrhage following amniocentesis resulting in perinatal losses. In both cases there were associated factors known to have high perinatal mortality risks, and in neither case was placental- or fetal-vessel trauma documented. Goodlin and Schwartz, reporting on 240 amniocenteses, described one case in which the amniotic fluid became blood-tinged and there was fetal distress requiring emergency cesarean section. The premature infant had a hemoglobin of 14.2 Gm., and died of hyaline-membrane disease. The supposition was made that the bleeding was from the fetal circulation. Holman and Karnicki have reported personal knowledge of a case in which a Tuohy needle passing through the placenta resulted in fetal death due to hemorrhage from a damaged vein on the fetal aspect of the placenta.

Although most authors[15, 22, 24, 30-33] have warned of puncture of fetal-placental vessels as a hazard, the patients of Goodlin and Schwartz and of Holman and Karnicki, along with our Case No. 1, appear to be the only documented cases of fetal death secondary to vascular perforation.

Liley,[30] Fairweather and Walker, Freda, and Queenan and Adams[47] have reported the frequency of bloody amniotic taps. In addition, they have differentiated maternal and fetal blood. Table 2 is a synopsis of their results.

Although these reports indicate that traumatic taps are common, the authors are by no means unanimous as to their significance. Goodlin[24] says, "Fetal blood is a cause of concern, but puncture of fetal vessels is apparently not life-endangering to the fetus." Menees *et al.*, Kerr and MacKay, Liley,[30] Macbeth and Robertson, and Alvey advocate advancing the amniocentesis needle through the placenta if blood is initially obtained. They feel that removing the needle and attempting a tap in another area adds to the possibility of placental trauma. In contrast, Cornell and Case, Barton and Stander, Crosby and Merrill, and Freda strongly advocate withdrawing the needle and puncturing at another site, in order to avoid further damaging the placenta or puncturing a fetal vessel on the chorionic plate.

TABLE 2

MATERNAL OR FETAL BLOOD FOUND IN AMNIOTIC FLUID

	Cases Total	% Bloody Taps	% Maternal	% Fetal
Liley[30]	200	50.5	45.0	5.5
Queenan and Adams[47]	74	54.0	40.5	13.5
Fairweather and Walker	178	52.0	50.0	2.0
Freda	379	7.6		

The fetal complications just summarized, together with our Case No. 1, have alerted us to the potentially serious fetal hazards present when amniocentesis is carried out through the placenta. We feel that except in unavoidable situations, the needle should *not* be advanced when the initial flow has been bloody and has not cleared spontaneously. Rather, a new and distant tap site should be used.

FETAL MORBIDITY

Liley[30] recorded definite placental puncture in 20.5 per cent of his taps; probable puncture in 10.5 per cent; and possible puncture in 14 per cent of his cases. The possibility of disrupting feto-maternal circulation and a consequent iso-immunization constitute a controversial complication of amniocentesis.[35, 46] Walker and Jennison showed a two-fold or greater rise in antibody titer in 42 per cent of their patients after amniocentesis. Zipursky *et al.* showed that in four of 13 cases from 10 to 50 ml. of fetal blood was transfused into the mother after bloody taps. Three of those four patients had Rh-positive infants and showed a subsequent two-fold titer rise. Queenan and Adams[47] reported five cases in which Rh-positive fetal blood was recovered at the time of initial amniocentesis. Anti-D titers two weeks

later were increased more than two-fold in four patients. Their fifth patient had a high titer, and it remained high. In 22 patients without aspiration of fetal blood on initial amniocentesis, only two had significant titer rises. Bowman and Pollock reported on seven out of 64 traumatic, or failed, amniocenteses in which gross amounts (5-50 ml.) of fetal red cells were found in the maternal circulations. Although associated sharp titer rises occurred, there was no evidence, in any case, that the fetus suffered. Further, they distinguished between trauma to the placenta that consisted of clean punctures without constant suction, and "plowing up the placenta by poking around, with constant aspiration."

Fairweather *et al.*[20] felt that there was no conclusive evidence that amniocentesis increases the maternal sensitization in the current or a future pregnancy. Kelsall's study supported that view. He showed that 55 per cent of his 566 iso-immunized pregnancies had significant rises in titer without having been subjected to amniocentesis. Clayton *et al.* investigated 657 patients for the presence of fetal cells in the peripheral maternal circulation during normal pregnancy. They showed that the incidence of fetal cells in the maternal circulation increases progressively from 5 per cent of patients in the first trimester to 47 per cent at term. McClure Browne[9] has also questioned the clinical significance of placental puncture as a source of ill effects to the fetus because of the frequency with which fetal cells are found in the maternal blood during normal pregnancy.

Because of the low incidence of fetal complications from placental puncture, Liley[33] does not feel that placental localization is necessary. Freda, however, has routinely utilized radioisotopic placental localization and, as is shown in Table 2, he has had a markedly low incidence of bloody taps. Mann *et al.* described an amniocentesis technic utilizing a Teflon catheter, by which he has achieved a significant reduction in the incidence of bloody taps without using placental-localization procedures.

The incidence of premature labor and its direct causal relationship to amniocentesis are difficult to assess. Bevis[8] has described the premature delivery of an abnormal 24-week fetus two days after the first amniocentesis. Crosby and Merrill have reported spontaneous labor within 24 hours of anmiocentesis in two patients who delivered hydropic stillborn infants. However, they did not feel that there was a causal relationship because of the common occurrence of premature labor soon after fetal death or the development of hydrops. Fairweather and Walker compared two matched groups of 100 cases each in which amniocentesis was performed in one group and not attempted in the other. They found no difference in the frequencies of premature labor in those two otherwise-comparable groups. In other large series,[1, 22, 27, 30, 31, 35, 46, 55, 56] premature labor has not been found to be a problem.

A serious complication from accidental fetal puncture has not been reported. It would appear that the only serious hazard arises when one attempts a tap in the area of the fetal neck, for there, a misjudgment of fetal position could lead to a needling of the fetal eyes.

CONCLUSIONS

Amniocentesis plays an important role in current obstetrical management of Rh sensitization and hydramnios. Although complications are rare, the dangers must be recognized, and unnecessary taps must be avoided. The role of amniocentesis must be evaluated carefully when complications occur, so than an accurate assessment of its role can be made.

We feel that our case reports call attention to the following points:

1. Proper selection and timing for amniocentesis are important. Amniocentesis is not generally necessary in the last four weeks of pregnancy when two Zone I readings have been recorded prior to that time.

2. When blood is encountered, and it does not clear spontaneously, the needle should be withdrawn so as not to traverse the chorionic plate.

3. When one removes fluid in cases of hydramnios, he should remove it slowly in order to avoid precipitating premature labor and/or placental separation.

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University of Iowa
College of Medicine

Clinical Pathologic Conference No. 491

Headache, Confusion, Abnormal Spinal Fluids

RAYMOND F. SHEETS, M.D., Chairman,
CPC Committee
SYLVIA E. LARSON, Secretary

SUMMARY OF CLINICAL FINDINGS

Upon admission, a 44-year-old mother of 14 revealed that she had been in fairly good health until her most recent delivery, one year earlier. Two weeks afterward, however, she had developed stomach cramps, nausea and vomiting. She had been admitted to the local hospital, and after a negative gastrointestinal and gallbladder series, she was thought to have a "spastic colon," and was given some medication. She continued having mild nausea and cramps, worst after eating. She lost her appetite for a week at a time. She also had intermittent mild headaches. Ten months before her admission to University Hospitals, she had taken birth-control pills for a four-month period, and seemed to think that her headaches were lessened. For three months before her admission, she had had episodes of nausea and vomiting two or three times per day, usually after meals. At times she vomited when she hadn't eaten, and she described the vomitus as a yellow-green fluid. She had had a 40 lb. weight loss in the three months before her admission, and over the past year had experienced a total weight loss of about 50 lbs.

During the three months before her hospitalization in Iowa City, she had had severe headaches daily. They started in the occipital area, radiated down into her neck, into the temporal regions and deep in her eyes. She also complained of some stiffness of the neck. For the first few weeks aspirin seemed to help. She then took Excedrin, two tablets every four or five hours, but her headaches were not relieved. Exposure to light increased her headaches, and at times she had double vision. About a week before her admission she began having dizzy spells and blackouts. She lost consciousness for three or four minutes at a time, and a week prior to her admission at University Hospitals, she entered her local hospital. X-rays of her spine, skull and chest taken there were reported normal. A lumbar puncture at that hospital revealed a pressure of 375 mm. H_2O, protein 425 mg. per cent, 8 lymphocytes, 19.6 sugar and 113 mEq./L. chloride. Cultures were negative. Because of her continued headaches, vomiting and confusion, she was transferred to this Hospital. During the past few weeks she had noticed some loss of hair and a tendency to bruise easily.

She had been in fairly good health until 11 months before her admission. She had had difficulty with her low back and her right hip for 10 years, and had been told she had some arthritis. She had had a cyst removed from her left breast six years before her final hospitalization. During some of her pregnancies she had had difficulty with increased blood pressure, and she said that during a pregnancy five years before her University Hospitals admission, she

had had numbness over the left side of her body for half an hour.

Physical examination at the time of her admission revealed a temperature of 99.8°F., a pulse rate of 60/min., and a blood pressure of 140/70 mm. Hg. Her skin was dry and cool. She appeared chronically ill and somewhat confused. Her hair was thin. Further examination revealed that she had some shotty right-axillary nodes. Examination of the breasts, chest, abdomen and pelvis was negative. Her pupils reacted well bilaterally. The fundi were normal. There was some question of left facial weakness and some question of nuchal rigidity. She seemed a bit ataxic when she walked. Extra-ocular movements were normal. She had no nystagmus, and her visual fields were full. She had no definite motor or sensory loss.

A lumbar puncture revealed a 1+ Pandy reaction and a pressure of 250-500 mm. H_2O. The fluid was slightly xanthachromic, and contained 7 lymphocytes, 2 red cells, 250 mg. per cent protein and 50 mg. per cent glucose. The culture was negative. Skull x-rays, chest x-rays, and cervical and lumbar spine x-rays were normal. Skin tests for tuberculosis, blastomycosis, histoplasmosis and coccidiomycosis were negative. The hemoglobin was 12.4 Gm. per cent, the hematocrit was 38 per cent, the sedimentation rate was 39 mm./hr., and the white blood cell count was 5,100/cu. mm., with a normal differential. The urinalysis was negative, the blood urea nitrogen, creatinine and electrolytes were normal, a serologic test for syphilis was negative and the protein-bound iodine was 8.5 micrograms. An electrocardiogram showed minor ST and T changes, a brain scan was negative, and an electroencephalogram showed some asymmetry, with some 14-per-second positive spikes. Bilateral carotid angiograms were normal.

One week after the patient's admission to this Hospital, she continued having severe headaches and stomach cramps. A pneumoencephalogram was interpreted as normal. Twelve days after admission she had mild left-sided weakness, questionable nystagmus, questionable decreased sensation on the left side of her body, and blurred vision. A ventriculogram 13 days after admission was interpreted as normal, but the cytology performed on cells from the fluid taken at the time of the ventriculogram was reported as Class II atypical.

Two weeks after the patient's admission her pupils did not react to light, and her vision was near zero. At that time she was running a temperature of around 100°F. She had a mild infection in one of her scalp incisions. A repeat lumbar puncture at two weeks revealed a pressure of 270 mm. H_2O, 20 red blood cells, 7 white blood cells, a 2+ Pandy reaction, a negative culture, sugar 40 and blood sugar 150, protein 195, slight xanthochromia and no yeast bodies. Her condition continued to deteriorate generally. Her temperature stayed at about 100°F., and she continued vomiting to the point where she had to be maintained on intravenous fluids. Four and a half weeks after her admission it was noted that her left pupil was constricted. She then developed respiratory distress and died.

CLINICAL DISCUSSION

Dr. W. R. Anderson, Obstetrics and Gynecology: I should like to read to you the last note on this patient's chart: "Brucellar titers are negative. Continues slowly to deteriorate. Still attempting to find diagnosis, but can't. Has small urethral carbuncle which is bleeding. Hold little hope now."

Mr. John Carrigg will discuss the case on behalf of the students.

Mr. John Carrigg, junior ward clerk: The patient was a middle-aged woman who developed abdominal complaints shortly after the birth of her fourteenth child. She then had a relatively short course of illness (11 months) characterized by protean neurologic findings associated with what could have been a systemic disease. The neurologic pattern suggested the cause of death to us. It was characterized by progressive severe headache, nausea and vomiting. There were general neurologic signs along with some vague and inconstant local ones such as cranial-nerve palsies, sensory deficits, muscle weakness and visual disturbances. Together, those suggest a diffuse disease. We students believe that the confusing neurologic pattern is compatible with metastatic neoplasm of the central nervous system. More specifically, our diagnosis is meningeal carcinomatosis.

Williams, Bosanquet and Daniel, in a review

of over 50 cases, found that carcinomatosis of the leptomeninges has certain distinctive features. They are three months to a year of vague ill health due to the primary neoplasm, and then the onset of fatal neurologic symptoms. Nervous-system disease appears suddenly and progresses to death within a few months. The symptoms consist of unusually prominent headaches, often so severe as to suggest cranial arteritis, and visual failure in over half the cases due to tumor cells around the optic nerve. The other usual signs are paresis of several cranial nerves, and almost invariably an absence of fever in uncomplicated cases. Another very important characteristic is clear cerebrospinal fluid under increased pressure; and still others are a white count of less than 100/cu. mm., an elevated total protein, and a low or absent sugar. Often the diagnosis is made conclusive by the finding of malignant cells.

This woman had a disease that was certainly compatible with the findings in the 50 cases reviewed by Williams, Bosanquet and Daniel. She had a 40-lb. weight loss, a prodrome of abdominal symptoms, progressively severe headaches, meningeal signs (stiffness of the neck), visual signs (diplopia and photophobia), and finally a progressive loss of sight. She further had muscular weakness and the characteristic cerebrospinal-fluid findings. The slight and inconstant xanthochromia was probably due to increased protein. Last but not least, there was the finding of Class II atypical cells in the woman's ventricles, which according to Dr. McCormick indicates a 50 per cent chance of malignancy. These certainly lead us to the diagnosis of meningeal carcinomatosis.

A problem here is the absence of abnormal cells in the spinal fluid, though cells were found in the ventricular fluid. That discrepancy may have been due to a mistake in the examination of the fluid, or possibly to an intermittent obstruction.

Certainly there might be other diagnoses, but we feel that most of them can be ruled out. The other possibilities that our group considered were (1) primary brain tumor; (2) meningitis of fungal, viral, tuberculous or pyogenic etiology; (3) sarcoidosis; (4) neurosyphilis; (5) collagen vascular disease; and (6) meningeal leukemia. We believe a primary brain tumor is unlikely because of the general diffuseness of the disease and the important negative findings (brain scan, pneumoencephalogram, ventriculogram and carotid angiogram). The EEG, in this case, is felt to have been nonspecific. A low cerebrospinal-fluid sugar is also very unlikely with primary brain tumor. A posterior-fossa tumor that might not show up in these diagnostic tests is unlikely in an adult with only equivocal ataxia as a cerebellar sign. A brain-stem tumor such as a creeping ependymoma is possible, but would not be likely to cause low sugar or such widespread signs.

Sarcoidosis must be ruled out. In this case the lack of the usual signs of eosinophilia, anemia and leukopenia, with the abnormal cerebrospinal-fluid sugar and the lack of pulmonary symptoms, make it unlikely.

Neurosyphilis certainly can present almost any neurologic picture. The lack of marked cerebrospinal-fluid lymphocytosis, which is usually 100 to 1,000 cells/cu. mm. in neurosyphilis, the rapidity with which the patient died, her lack of a syphilitic history, and the negative result of the serologic test, which is positive in 80 to 90 per cent of tertiary syphilis cases, make that diagnosis unlikely.

A collagen vascular disease such as cranial arteritis or systemic lupus erythematosus can be entertained because of the severity of the patient's headaches, her systemic abdominal signs, her meningeal signs, her photosensitivity and many of her other symptoms. However many other of the signs were missing. Her moderate sedimentation rate—only 39 mm./hr. —the absence of rash, anemia and renal signs, plus the findings of increased cerebrospinal-fluid pressure and low sugar, make one look elsewhere for the diagnosis.

Meningeal leukemia will certainly present in this way, but it is very unlikely in view of the patient's normal peripheral white blood cell count and differential.

Thus we are left with pathology of the meninges. We believe that pyogenic meningitis was not the cause of this woman's death because there was no significant fever or pleocytosis, and because the cultures of the cerebrospinal fluid were negative. Viral meningitis

is also unlikely because of the protracted though certainly lethal course of that disease. The lack of lymphopleocytosis, the apyrexia and the abnormal cerebrospinal-fluid findings in this case also seem to rule out that possibility.

Tuberculous meningitis certainly presents a similar picture, but we ruled it out on the basis of the normal chlorides in the cerebrospinal fluid. In addition, the patient had a negative skin test, she was apyrexic, and she retained a considerable degree of consciousness. An article by Hays and Adams states that one of these last two findings (lack of fever and retention of mental clarity despite obvious disease) makes the diagnosis of tuberculosis unlikely, and both of them make the diagnosis virtually impossible. Lack of pulmonary signs is also significant.

We cannot rule out fungal meningitis completely. The manifestations in the cerebrospinal fluid are very similar in that disease and in this patient, except that the proteins and pressure are not usually so high in fungal meningitis. However we assume that no India-ink preparations were made, or that they were negative, and we know that no yeast-like organisms were found. Thus torulosis was unlikely. Other fungal skin tests were negative, and no pulmonary signs were present. Hopefully, though not conclusively, we excluded fungal meningitis.

There is a problem with our diagnosis of meningeal carcinomatosis. Where was the primary tumor? Three possibilities come to mind —breast cancer, gastric or other abdominal cancer, and because of the relationship between pregnancy and the onset of this patient's illness, choriocarcinoma. We feel that choriocarcinoma is unlikely because of the lack of positive pelvic findings, because of the extreme rarity of meningeal metastasis of choriocarcinoma, and most of all, because of the negative chest x-ray. The chest is said to be the first site of metastasis in over 80 per cent of choriocarcinoma cases. The stomach is a very good possibility as a primary site. Although the progressive vomiting this patient did could have been due to an intermittent hydrocephalus and increased pressure, we are inclined to think of it as a consequence of progressive gastric or bowel obstruction. The frequency of her vomiting, its relationship to meals, plus her abdominal cramps, all suggest this. Consequently we think that a gastric carcinoma is possible. It is the most common metastatic lesion to the meninges, though gastric carcinoma in a 40-year-old woman is unlikely.

Another very interesting possibility would be an undiscovered breast carcinoma. The patient's six-year history of cystic disease, plus the onset of her symptoms after pregnancy, with its high estrogen levels and the likelihood of meningeal metastasis from breast carcinoma, suggest this strongly. Another very interesting point in this regard is the apparent relief of the patient's headaches while she was on birth-control pills. Lewison, in his book BREAST CANCER says that exogenous estrogens often cause a lessening of the symptoms and signs of metastatic breast carcinoma in premenopausal women. These facts point to the breast as a very likely primary site. We cannot, however, explain the negative breast examination.

In conclusion, then, the students feel that this woman died of meningeal carcinomatosis, probably caused by either breast or abdominal carcinoma, and that except for fungal meningitis, the other possible diagnoses can be ruled out on the basis of the complete spectrum of the patient's disease.

Dr. Anderson: We want to thank you for the careful consideration you and your group have given this particular case. Your discussion was most interesting.

Dr. Sergio Rabinovich will present this case for the staff.

Dr. Sergio Rabinovich, Internal Medicine: Dr. Cohen tells me that all the x-rays which were reported as normal in the protocol were indeed normal. That, I think, was some very helpful information. I had an opportunity to see the chest x-ray, and it was completely normal. There was no calcification that I could detect—not even a possibility of one.

The discussion by Mr. Carrigg has been excellent. I think he has covered most of the possibilities that we should consider, but he has ruled out quite a few things that I was unable to exclude. The patient was the 44-year-old mother of 14. She developed intermittent—and, I insist, intermittent—manifestations of

central-nervous-system disease, associated with nausea and vomiting (which are non-specific symptoms), and with so-called "stomach cramps." Actually the stomach very seldom produces cramps, so I shall assume her pains were abdominal cramps. In association with those symptoms she had a significant weight loss, and she had variable—changing—neurologic signs.

One thing that is unquestionably clear is that there were definite abnormalities in her cerebral spinal fluid each time it was examined. I can appreciate the problem the clinicians had in trying to rule out an expanding lesion in this woman. They tried very hard, subjecting her to brain scan, pneumoencephalogram, carotid angiograms, skull x-rays and ventriculograms—going as far as they could, short of an exploration. I think they ruled out a significant-sized expanding lesion. That helped me very much. We are left, then, with a picture of meningeal inflammatory disease. Let me just list the possibilities that have been left to me —diseases that can produce meningeal syndromes:

1. viruses
2. rickettsiae
3. spirochetes
4. bacteria (including Mycobacterium tuberculosis)
5. yeasts
6. other parasites
7. abscesses (sarcoid tumors)
8. non-infectious agents (allergies and others)

Now for the viruses, I think we need have little difficulty in ruling them out. Most viruses produce rather acute disease, and the spinal fluid of this patient was incompatible with what we usually find in such an illness because of the low sugar and the protein higher than 100 mg. per cent. The so-called "slow" viruses, or china viruses, are neuropathic agents producing very chronic disease, but usually they are not associated with this patient's kind of spinal fluid. I am unwilling to make a diagnosis of kuru, unless the patient came from New Guinea, which as far as we know wasn't the case. The spinal fluid is also incompatible with the diagnosis of rickettsiae and spirochetal disease. The usual bacterial type of infection can be dismissed readily because of the duration of the disease and other factors.

Tuberculosis is something that is very difficult or even impossible to rule out. There are very few symptoms, signs or combinations of them that tuberculosis cannot produce or mimic under some circumstances, although except in the South tuberculous meningitis is infrequent in this country. All over the rest of the world, TB meningitis is a common illness, however. It can be found in patients of any age, and it can produce any type of disease. Against that diagnosis in this patient is the fact that the disease was chronic, with intermittent remissions. Although tuberculosis presents slowly and is not an acute illness, it usually is progressive. The negative skin test, although we were not told what strength of PPD was used, doesn't completely rule out the diagnosis. Probably the most important factor that renders this possibility unlikely is the chronicity of the disease, with periods of remission. We are not told whether special cultures were made to isolate that organism, but if they were, the patient was in the hospital long enough for a positive culture to be obtained. Usually too, the number of cells in tuberculosis is greater than that which was found in this patient. There were just a few lymphocytes in the spinal fluid—from 8 to 15. All the other findings were compatible with tuberculosis. I find this disease difficult to rule out, although I think it unlikely on the basis of what I have said.

We shall leave the yeasts for a little while and come back to them. All the parasites, I think, are unlikely possibilities because all of them manifest as expanding lesions, or do not produce the chronic disease seen in this patient. Abscess, if you will, with intermittent breakthrough of bacteria into the spinal fluid, is quite unlikely. There are few bacteria that allow the chronicity of disease that occurred in this patient. I think any significantly large expanding lesion has been ruled out by the extensive work-up.

The non-infectious meningeal meningitides are, again, very difficult to rule out. Sarcoidosis can, indeed, produce the clinical picture that this patient had, except for the spinal-fluid findings. The lack of evidence of sarcoidosis elsewhere makes that diagnosis unlikely.

The possibility of tumor has been well discussed by the previous speaker, and certainly it is very difficult to rule out. There are some CNS tumors that can metastasize and do metastasize to the meninges. Medulloblastoma is one of them, and I believe that papilloma of the choroid plexus can also metastasize to the meninges and produce a similar picture. Next, the stomach neoplasms metastasize frequently to the meninges. Here we are talking about meninges and not about the brain parenchyma, which presents quite different problems. Basically we have ruled out any large, expanding lesion, and thus I am excluding any lesion that might metastasize to the brain over the indicated length of time without causing a lesion which could be detected by the tests that have already been mentioned.

Now for lung tumors. Apparently bronchogenic carcinoma very seldom metastasizes to the meninges, although it frequently metastasizes to the brain. More frequently, adenoma of the lung produces this picture. There is nothing which really suggests that this patient had a lung lesion of this type. The breast and kidneys have already been discussed.

Finally we come to yeast meningitis. In general, some of the yeasts can cause a very chronic type of meningitis—some of them interrupted by partial or complete remissions of varying durations. Here we shall have to consider a long list of fungi. I think the most likely one to have produced a chronic disease of the type this patient had is *Histoplasma capsulatum*. It rarely occurs in the abdomen without causing significant disease elsewhere. Frequently it is associated with endocarditis, and sometimes with significant and obvious lung disease. The fact that the patient had a negative skin test really says very little either in favor of or against that diagnosis. Cooper and Goldstein's review of 26 patients included the report that 12 of 17 patients had negative skin tests. I doubt that a normal population in Iowa would present results very different from those. Unfortunately something similar was true for the complement-fixation test which we usually think of as a better test for histoplasmosis. Only five of nine of Cooper and Goldstein's patients had positive complement fixations. It would be somewhat unusual not to be able to isolate the organism from the spinal fluid or elsewhere. By "elsewhere" I mean mainly the blood or the bone marrow, although the latter was not attempted in the case under discussion.

Most of these patients do have significant fever. Frequently they have evidence of disseminated disease such as significant hepatosplenomegaly, anemia and the manifestations of lung illnesses. MacQueen and Van Epps[1] reported a case of histoplasma meningitis in the JOURNAL OF THE IOWA MEDICAL SOCIETY, in 1956, I believe. The patient was a four-month-old child. Histoplasmosis usually produces an expanding-lesion syndrome visible on x-ray. Our patient did not have that.

Candida albicans is another agent that is very difficult to rule out in this patient. Most patients with *Candida meningitis* reported in the literature have been males. More than half—indeed about 75 per cent—have had significant underlying disease. Some of them have had histories of long-term antibiotic or prednisone treatment, or the administration of some other agent that is thought to reduce the patient's so-called general defenses.

Finally we come to a type of fungal disease that I believe this patient may have had. Cryptococcosis is a meningeal disease producing a very protracted illness with remissions. Involvement of the parenchyma itself might or might not produce evidence of an expanding lesion. In a review published by Butler,[2] in 1964, four patients with cryptococcal meningitis were reported. Headache was present in three-fourths of the patients, mental changes in about one half, and eye symptoms in about 40 per cent. Those include many of the symptoms and signs that our patient had during the course of her illness—blurred vision, photophobia, diplopia, etc. Fifteen per cent of Butler's patients had no CNS symptoms, although they did present evidence of the disease on culture or by other means. Ataxia was present in about 10 to 15 per cent of them. But in our case the diagnosis is unlikely because the cultures were negative. Cryptococcus is not difficult to grow in the laboratory. It can be grown in the usual laboratory media. Occasionally it may take a long time to grow. When one requests a culture for fungus, the laboratory may keep the specimen for an unusually long time, cer-

tainly more than two weeks, but the organism unquestionably will be detected. Frequently, though, it grows in four or five days. The fact that on one occasion the cerebrospinal fluid was examined for yeast forms—I presume with India ink—with negative results, does not rule out the disease. Fifty-seven per cent of the time, Butler was able to detect it on direct smear, but the remaining 43 per cent of his cases represented a rather large group, in all of whom cultures revealed yeast-like forms that had not been seen in the spinal fluid. The number of cells in cryptococcosis is not very large, and the number found in this patient was compatible with the diagnosis.

The sugar is normal in half of the patients with cryptococcosis. In the first and third spinal-fluid specimens taken from this patient the sugar could be considered definitely abnormal. About the second sample, we don't have enough information. By that I mean that a simultaneous blood-sugar measurement was not made to determine whether the CSF sugar was normal or abnormal. A normal CSF sugar is about 60 per cent of the blood sugar. Something else that we should consider when we do these two tests is the length of time that may have to elapse before these measurements can reliably be made. For example, if the patient has just eaten, or if he has had IV glucose and water running, two or three hours must be allowed to pass before his CSF glucose and blood glucose can be accurately compared. The ideal thing to do would be to perform a spinal tap only on a fasting patient, but that is not always possible or desirable.

In summary, I believe that the patient had a meningeal syndrome. Of that, I am pretty certain. From there on, I think there can be a fair amount of speculation. Probably the patient had a fungus infection of the meninges, most likely cryptococcal. I cannot definitely rule out a carcinomatosis of the meninges, but I don't think that this woman had one.

Dr. Anderson: We have been given varying opinions about the type of meningeal lesion that this patient had. I guess we must pay our money and take our choice. As a gynecologist, I was happy to hear choriocarcinoma mentioned as a possibility. Certainly that had been one of my first thoughts when I read the protocol. Like the junior discussant, I should have to say that the ordinary carcinomatous lesion contains a great deal of hemorrhage and necrosis, however. If the lesion had been a meningeal or some other brain involvement, I should have expected that lots of red blood cells would have been found in the spinal fluid, and certainly that the patient would have had a much more rapid course. The absence of chest findings, likewise, should help to rule out choriocarcinoma.

Dr. William F. McCormick, Pathology: Choriocarcinoma, by the way, when it involves the brain, may produce a stroke syndrome.

This patient had a carcinoma of the breast which had not been detected clinically and had metastasized very widely throughout her body, including her central nervous system. Figure 1 is a low-power photomicrograph of the lobular-type carcinoma of the breast that was found at autopsy. This rather undifferentiated, small-cell, variably mucin-containing cancer was seen

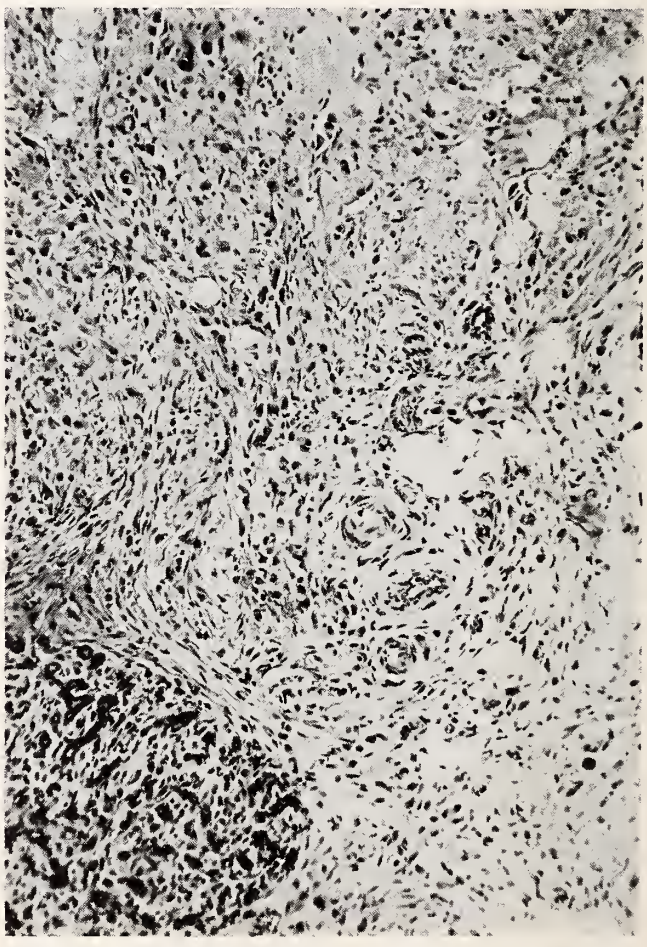


Figure 1. Photomicrograph of breast with an occult, infiltrating carcinoma. H&E X100.



Figure 2A. Photomicrograph of small intestine illustrating infiltrating carcinoma. The serosa is at the top in this picture. H&E X70.

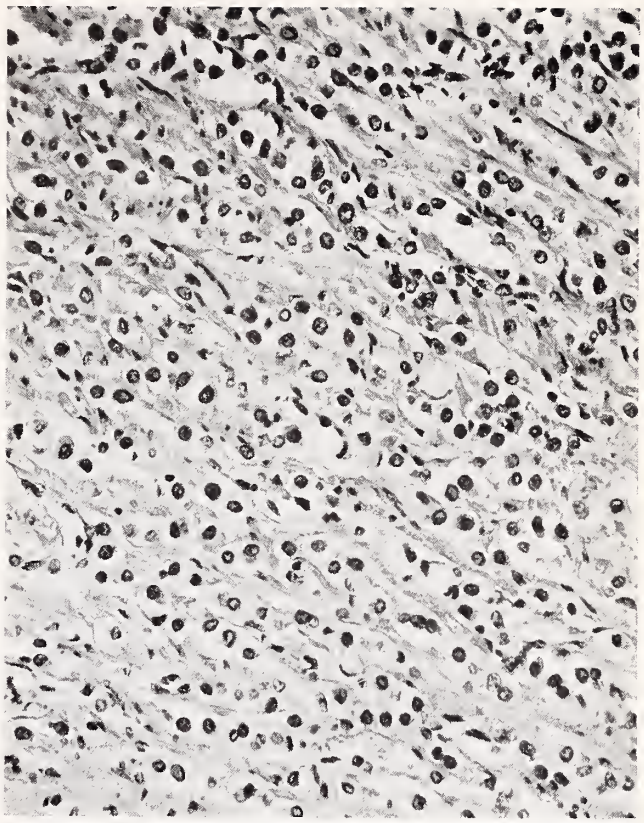


Figure 2B. Higher magnification of small intestine showing the neoplasm infiltrating the muscularis. Gland formation is absent. H&E X270.

throughout the body. The patient had abdominal symptoms—cramps, nausea, vomiting, etc. —and rather than having a central origin, I think they were due to the lesions we shall now show in her abdomen. Figure 2A is a photomicrograph of mucosa from the wall of the small bowel, and you can see that it is expanded and highly cellular. At a higher magnification (Figure 2B) we can see the diffuse infiltration of the muscularis submucosa and mucosa by this poorly-differentiated neoplasm. The patient had a partial intestinal obstruction because of that bowel involvement. The tumor completely encircled the bowel in many places, markedly stenosing the lumen. In addition, there were adhesions between loops of intestine. The partial intestinal obstruction undoubtedly was responsible for much of the abdominal symptomatology.

A low-power photomicrograph of the medulla (Figure 3) shows the neoplastic infiltration of the meninges. The meninges of the entire brain were filled with this poorly-differentiated, variably mucus-containing carcinoma that had arisen in the patient's left breast. Here in the hippocampal fissure (Figure 4) you can see the meninges filled with neoplasm encircling some of the vessels, but not penetrating the vessel walls. At a slightly higher magnification, you can see the meninges from many different places in the brain packed with neoplastic cells. Some of the cranial nerves had been invaded as well as encased by the neoplasm, and that involvement was responsible for the patient's cranial-nerve palsies. Those palsies are not necessarily secondary to pressure at all. They may be due to direct infiltration, as was the case with the fifth nerve in this patient. The amblyopia which is typical in such patients may be due either to nerve involvement, as was mentioned earlier, or to pressure. Neoplasm had invaded the outer layer of the brain stem. There were no large tumor metastases—no large nodules in the brain itself—as had been indicated by the very detailed clinical workup.

A patient with one cancer has a statistically increased chance of having another one. Thus we weren't surprised to find a little occult



Figure 3. Ventral aspect of medulla with carcinoma cells infiltrating leptomeninges. H&E X125.



Figure 4. Carcinomatosis of leptomeninges—hippocampal fissure. Figures 3 and 4 are typical of the leptomeningeal involvement by the carcinoma in this patient. H&E X70.

carcinoma of the thyroid. It had absolutely nothing to do with this patient's problems. These photographs show the margin of the little thyroid adenocarcinoma.

Table 1 is taken from an article by Courville. It shows the origins of meningeal carcinomatosis in some 100-odd patients. About 200 cases of meningeal carcinomatosis have been reported in the literature, I believe, but any large series of patients with neoplasms that have metastasized to the central nervous system contains a number of such cases. They really aren't rare. Among the last 40 patients with CNS metastasis whom we have seen here, there have been two of them. Table 1 is the largest compilation that I have come across, and rather than put together the findings in all of the 200-odd reported cases, I have chosen to show you this one. Stomach, lung and breast, in that order, seem to be the three primary sites from which a diffuse neoplastic involvement of the leptomeninges may occur.

I ought to say a word or two about something that was diagnostically important in this patient, and about which most of you aren't familiar with—the cerebrospinal-fluid cytology. I don't worry very much about the general cytologists' Classes I, II and III when I categorize cervical, pleural or peritoneal cytology. I use my own ideas. "Class I" means to me that the patient has some strange-looking cells that I don't think should be found in spinal fluid, though I really don't think they are cancerous. When I call cells "Class II" or "Class III," I mean that they probably are cancerous. I have gone back through our spinal-fluid cytologies for the past three years, and I have found no false positives of either "Class II" or "Class III."

We use a Millipore filter, but there are other satisfactory technics. You can see from this photomicrograph (Figure 5) that cell types are very easy to recognize on a good Millipore preparation, so we really are not guessing.

TABLE I

SITES OF PRIMARY TUMORS IN MENINGEAL CARCINOMATOSIS

Primary Site	Number of Cases	Per Cent of Cases	Type	Grade
Stomach	53	37	adenoca.	IV (usually)
Lung	36	25	adenoca. (usually)	undiff. (usually)
Breast	16	11	——	——
Colon	8	6	adenoca.	undiff. (except 1)
Pancreas	5	3	adenoca.	undiff.
Melanoma-skin	3	2	melanoma	——
Adrenal	2	1	adrenal cort. ca.	——
Prostate	2	1	adenoca.	——
Gallbladder	1	1	adenoca.	undiff.
Testis	1	1	——	——
Unknown	20	14	many adenoca.	undiff. (usually)
Total	147			

Modified after Hermann and Courville.

There is no problem about identifying cells in well-collected fluid, and of course it is absolutely critical for the fluid to have been correctly collected and handled. The handling of specimens is probably more important in these instances than it is in cases of suspected cancer of the cervix, for example.

One of the criteria most useful to us is the tremendous variation in size between neoplastic cells and inflammatory cells in many cases. We are helped even more if we encounter exfoliation into nice discrete packets of cells. This often happens. Now as you know, one doesn't make a diagnosis of cancer solely on the basis of cytology, or at least one shouldn't, although as I have said we thus far have "batted a thousand" on the "Class II" and "Class III" cases. The simple apparatus we use consists of Millipore field monitors. They were developed for the bacteriologic testing of water samples. A detailed cytology examination of a CSF specimen may take several hours, so we don't like to undertake one on a patient who we know darned well doesn't have a tumor.

In summary, this patient had metastatic carcinomatosis of the leptomeninges from an occult breast cancer. Like Dr. Rabinovich, I see no way to be absolutely certain that such a case as this was not due to a fungus infection.



Figure 5. Photomicrograph of Millipore-filtered specimen of spinal fluid illustrating two typical polymorphonuclear leukocytes and two lymphocytes. If proper precautions are taken, cell preservation is good and allows identification of cell types. Papanicolaou stain X400.

I might mention that some years ago I published a report of a very interesting case with Class III cytology. There were nice clumps of highly atypical cells, and like today's patient that man had a rather protracted clinical course, negative cultures and all the rest of it. When he died, he had the most florid and beautiful fungus meningitis I have ever seen.

Dr. Rabinovich: What was the size of the breast cancer?

Dr. Anderson: The pathologist was surprised when he found cancer of the breast. It had not been detected grossly. The breast was sliced open, a routine section was taken, and on histologic examination the breast tumor was found. The prosector hadn't suspected it, even when he had the tumor in his hand!

Audience: Was a bone-marrow done?

Dr. Anderson: A bone-marrow aspirate had been obtained. There were no tumor cells, and there was no report of a culture grown from the bone marrow.

Because this patient had an occult carcinoma of the breast and because therapy for that disease is still somewhat controversial, we thought you might enjoy a brief presentation by Dr. Liechty of current thoughts on that aspect of the problem.

Dr. R. D. Liechty, Surgery: In going through the chart, I have noticed that the junior ward clerk who worked up this patient noted nodes in her right axilla, and I want to compliment him on his clinical acuity.

Occult breast carcinoma occurs in about 1 per cent of the cases in women (the same proportion that is found in males). The first slide is the antithesis of the case presented today. This lady (Figure 6) was a patient of Dr. Fowler's who came in with incredibly far-advanced breast carcinoma. Notice the satellite nodules. Curiously, the cancer was limited to the skin. The chest, pelvic and spine films were negative, though I am sure she had distant metastases.

The next slide is a picture of a patient with breast carcinoma which developed when the patient was about 33 years of age. The slide on the left shows that the tumor involved the upper part of the lung. Dr. Ehrenhaft operated on her in 1957. He reported: "Inoperable breast carcinoma, metastatic to the left lung." There was absolutely nothing he could do other than biopsy. Here she is shown 10 years later, after an oophorectomy. The carcinoma has cleared completely, and she is living and healthy today!

Next slide. This is a lady who had a carcinoma removed in 1958 by Dr. Hickey. He noticed a sebaceous cyst on her scalp, and after



Figure 6. Patient who came in with incredibly far-advanced breast carcinoma. Notice the satellite nodules. Curiously, this cancer was limited to the skin. Chest, pelvic and spine films were negative.



Figure 7. Patient with scattered metastases throughout the pelvis.

the mastectomy he removed it and found that it was a metastatic implant. It is estimated that about 20 per cent of all the people who have carcinoma of the breast already have metastases when they are first seen, and another 50 per cent develop them later. Thus carcinoma of the breast metastasizes in 70 per cent of all the patients who have it. Something can be done for those people, even though it may be no more than palliation.

Next slide. This patient developed painful metastases to the spine. We put her on prednisone and she lived for about two years—pain-free for a year and a half—on steroids.

Next slide. This patient again shows the curious natural history of breast carcinoma. Her carcinoma developed in 1941. A metastasis emerged three years later on the abdominal wall. It was excised in Des Moines. Other metastases which developed five years later were irradiated. She came to us—next slide—with her spine eroded. This is all that was left of L-3. It was almost completely gone. On prednisone it filled in. She was paraplegic when she came in, but after treatment she got up, moved around, and lived for about 18 months, pain-free, though she subsequently died of cancer.

This slide (Figure 7) shows a patient who had scattered metastases throughout the pelvis. Next slide. About nine months later (Figure 8) the pelvis was free of metastases. She had gained 40 or 50 pounds by that time, and lived for 2½ years completely symptom-free.

In summary, then, five minutes is too short a time for me to give you a course in the treatment of metastatic breast cancer, but I want to get across one point, that something can be

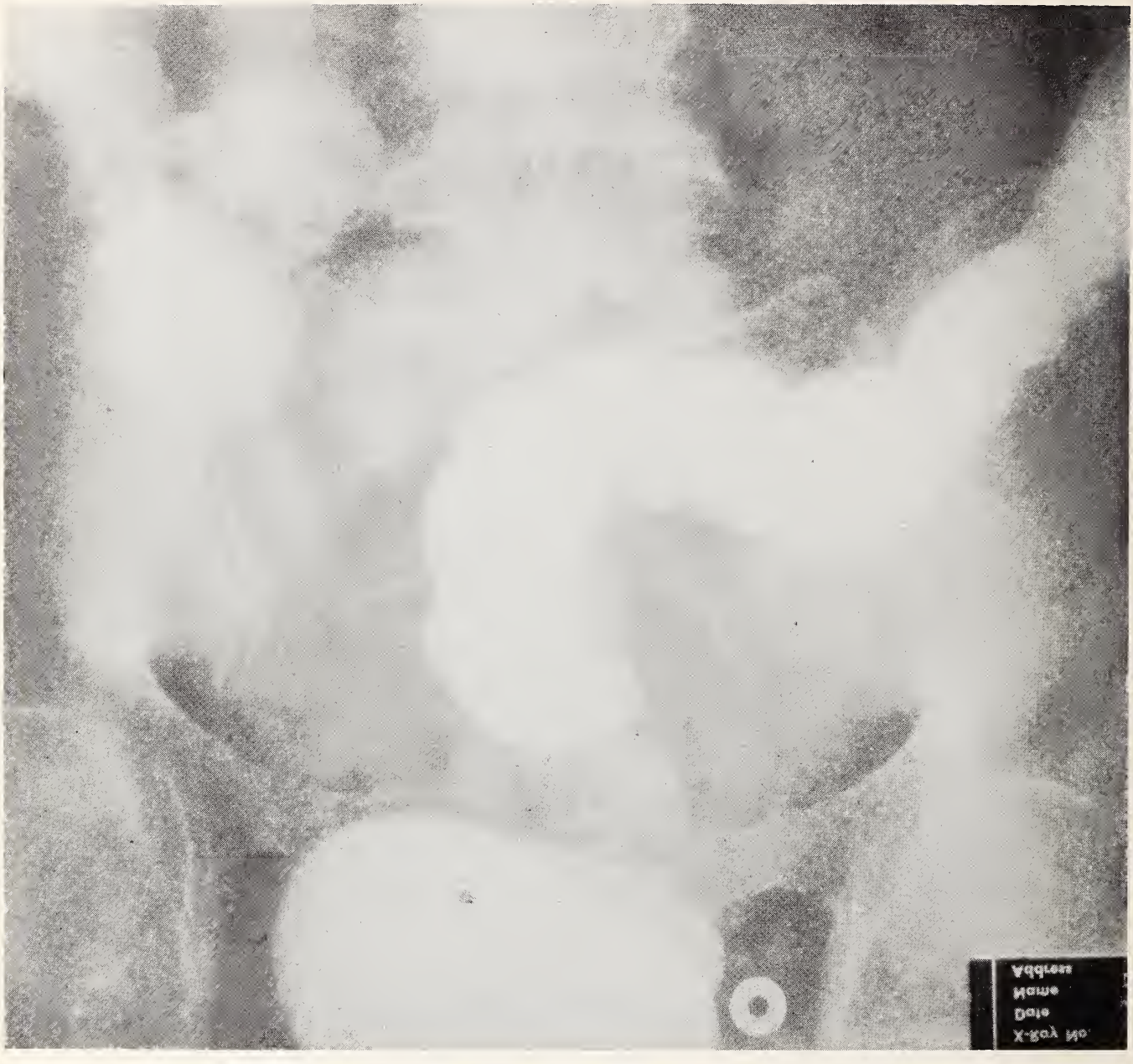


Figure 8. Same patient as in Figure 7, nine months later. The pelvis is free of metastases.

done for many of these patients. Somewhere between 20 per cent and 50 per cent or more can get a tremendous amount of relief from hormonal therapy. Again, this is only palliation, but sometimes we see 10-year survivals, such as the patient who underwent simple oophorectomy. I wonder whether the patient whom we have been discussing today could have benefited from oophorectomy. At her age (44) I think she would have had about a 50 per cent chance of a remission, but of course the diagnostic problem was extremely difficult, since there was no mass in her breast.

Dr. Anderson: May I ask you a few specific questions about therapy? With breast carcinoma limited clinically to the breast, is radical mastectomy indicated?

Dr. Liechty: I had hoped that no one would ask that question. There is a heated controversy regarding it. The treatments that are advocated vary all the way from x-ray therapy alone to super-radical mastectomy. At this hospital we rely on radical or modified-radical mastectomies.

Dr. Anderson: What about the patient who has metastatic disease, or has had primary therapy and is menopausal? What is the pri-

mary form of hormonal therapy for such a woman?

Dr. Liechty: Here, there is unanimity. Oophorectomy is the first choice.

Dr. Anderson: What about postmenopausal women?

Dr. Liechty: In postmenopausal women we rely on the cytologist to tell us whether the vaginal epithelium shows estrogen changes. If the patient is deficient in estrogens and is two to five years postmenopausal, estrogens are the first treatment. We give 15 mg. of diethylstilbestrol each day if the patient can tolerate it.

Dr. Anderson: Thank you. Certainly the discussion of a patient who had a breast carcinoma with so wide a metastatic spread that was not detected clinically must lead us to consider alternative diagnostic technics. In the few minutes that are left, I have asked Dr. Cohen, from the Department of Radiology, to discuss the radiologic diagnosis of breast carcinoma.

Dr. W. N. Cohen, Radiology: Mammography has gained considerable popularity in recent years, largely because of the rather remarkable success that several individuals have achieved with it. Their high degree of enthusiasm, however, is not shared by everyone. Those who claim accuracies of over 90 per cent insist that special and meticulous radiographic technics are responsible for their good results.

Some of the indications for mammography include signs and symptoms of breast disease; a strong familial history of breast neoplasm; difficulty in surveying the opposite breast after unilateral surgery; and general difficulties impeding examination. Although a mass may be palpable, a radiographic examination occasionally has demonstrated a second nonpalpable lesion.

In addition, several pilot studies have been done in an attempt to evaluate the usefulness of mammographic surveys in apparently healthy women. One of the more promising results was obtained at the Albert Einstein Medical Center. Eleven thousand twenty women had radiographic examinations there at six-month intervals for 10 years. During that period, 36 cancers were detected. Their average diameter was 1.1 cm., and axillary metastases were present in 30 per cent of cases. The anticipated five-year survival rate in that group of patients is 70 to 80 per cent. That contrasts with the prognoses in the group with lesions first detected by physical examination, in which the average diameter was 3.5 cm., and axillary metastases were present in 65 per cent. Those patients' anticipated five-year survival rate was 45 to 50 per cent.

A modification that has been used is xeroradiography. In that technic a charged selenium plate is exposed, instead of the ordinary x-ray film. After the exposure, the plate is dusted with an oppositely-charged powder, and the resulting radiographic image is photographed. This technic has the advantage of enhancing the contrast in soft tissues by means of the "edge effect" of the powder. The resulting image is easier to view than the standard mammogram. Another technic that has been used in conjunction with mammography is thermography. It consists of a scan of the infrared emissions from the patient's skin. They are recorded in pictorial fashion. The infrared emissions are greatest over malignant lesions. Therefore another means has been found to increase the specificity of diagnosis.

SUMMARY OF NECROPSY FINDINGS

1. Infiltrating lobular carcinoma of left breast, occult, with metastases to:
 a. leptomeninges
 b. liver
 c. adrenals
 d. ovaries and oviducts
 e. large and small intestines
 f. stomach
2. Follicular adenocarcinoma of thyroid, right lobe, 0.5 cm.
3. Emphysema, mild.

DR. RABINOVICH'S DIAGNOSIS

Meningeal syndrome, cryptococcosis.

STUDENTS' DIAGNOSIS

Meningeal carcinomatosis, probably breast.

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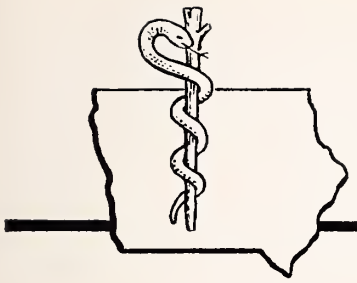
THE STAFF OF AESCULAPIUS

The staff of Aesculapius, the Greek God of Medicine, is the true symbol of medicine. Legend interprets the staff as one of the many Greek symbols that indicated the life giving quality of the physician. Snakes became connected with Aesculapius because of their wisdom which represented prudence. Their skin shedding ability represented longevity and immortality. Snakes symbolized convalescence in their ability to change from lethargy to rapid activity.

THE STAFF OF HERMES



The staff of Hermes is sometimes used as the symbol of medicine; however Hermes was not a physician but a clever thief who served as the "god of rogues". He was appointed to send the souls of the dead to Hell — scarcely the function of a physician. Legend indicates the snakes of Hermes had no medical significance — they were merely found fighting and were separated by his wand.



Editorials

A NURSE'S CREDO

"Nursing is being. It is plunging your arms elbow-deep into life and pulling up great handfuls. It is the protesting cry of the newborn, or the choking cough of an old man in the last throes of congestive failure. It is the precise stroke of the surgeon's scalpel, or the reassuring hand on a frightened child.

"Nursing is never dull: It is frustrating, but always satisfying; demanding, but always rewarding. A nurse walks through the heart of being—through happiness, suffering, victory, failure, life, death. Every day she runs a gauntlet of human emotion. Few others have the opportunity to experience so much aliveness—so much awareness.

"I chose nursing because a nurse is a little closer to life—and a little closer to death—and a little closer to God."

The above brief essay, written by a senior nurse in the Iowa Methodist Hospital School of Nursing, Des Moines, and published in the December, 1967, IOWA METHODIST HOSPITAL NEWS, reflects such idealism and insight that it deserves wide dissemination. It might well serve as a tenet for all who are engaged in any phase of the healing arts.

A PERMANENT PACEMAKER IMPLANTED WITHOUT A THORACOTOMY

A recent report by a Denver group of their experience with a permanent implantable transvenous pacemaker, without thoracotomy, in the management of heart block is of unusual interest.* The transvenous pacemaker has been employed as a temporary measure in the treatment of symptomatic heart block, but definitive therapy has required thoracotomy and the implantation of a battery unit and myocardial electrodes. As the Denver physicians point out, most patients requiring surgical treatment of heart block fall into the older age groups in whom thoracotomy imposes a significant surgical morbidity and mortality. By the use of a permanent implantable transvenous pacemaker, thoracotomy with its attendant risks can be eliminated.

Since July, 1966, a total of 12 patients with complete heart block have been equipped with permanent transvenous endocardial electrode pacemakers. Seven of them were males and five females. Their ages varied from 52 to 83, and averaged 69.6 years. In five of them the procedure was the initial definitive therapy; in seven it was carried out after other pacemaker implantations. In this group of 12 patients, there were no surgical or hospital deaths, and the morbidity was low. Infections have not occurred around the pacemakers or the electrodes.

The implantation of a permanent transvenous electrode pacemaker requires only small cervical and pectoral incisions. The surgery is usually done under brief general anesthesia, but it can be done under local anesthesia in poor-risk patients. The endocardial electrode may be passed through either the external or the internal jugular vein, and it is positioned under the fluoroscope, so that the tip of the catheter is wedged securely in the trabeculae of the right ventricle. The catheter is then securely fixed to the vein at the site of insertion, and the power unit is placed either subcutaneously or subpectorally.

* Rainer, W. G., Newby, J. P., Liggett, M. S., and Schoonmaker, F. W.: Transvenous pacemaker control of heart block. ROCKY MOUNTAIN M. J., **64**:49-51, (Nov.) 1967.

The authors point out that it is important to assure stable positioning of the electrode catheter. Occasional myocardial perforations have been reported, but repositioning can be accomplished without unusual difficulty, and permanent problems ordinarily do not occur. One cause for concern is the possible development of thrombi which may result in repeated pulmonary emboli. However the incidence of this complication is surprisingly low. Long-term studies have demonstrated that the tip of the implanted catheter becomes covered by ventricular endocardium to form a smooth, fibrous lining which helps to provide permanent, secure fixation. Anticoagulants are usually not recommended, and they were not employed in any of the patients in this series.

As a result of their experience, the Denver physicians assert that all patients with symptomatic complete heart block should be considered potential candidates for permanent pacemaker control of cardiac rhythm. The symptoms are those that are associated with a low cardiac output—Adams-Stokes syndrome, exertional dyspnea and refractory congestive failure. Temporary transvenous pacing may suffice in patients with transient heart block complicating myocardial infarction—ones in whom there is an early return to a normal sinus rhythm and an adequate ventricular rate. In temporary pacing, the electrode catheter is connected to an external power source, and pacing is continued only during the period of abnormally low ventricular rate.

It is in patients with permanently complete heart block that a transvenous electrode catheter, connected to an implanted power source, is utilized. In patients with severe sinus bradycardia and variable heart block the indications are not clearly defined and a period of temporary pacing may be indicated.

It is emphasized that the patient should count his pulse rate for one full minute daily, and report any significant change in rate, even a plus or minus five beats per minute. Electrocardiograms are taken at monthly intervals for purposes of comparison. It is extremely important that a change in rate is not ignored, for impending battery exhaustion is usually heralded four to six weeks before a power failure occurs, and uncontrolled ventricular rates can result from the pacemaker unit's having a faulty timing mechanism.

The authors conclude that the completely implantable pacemaker utilizing a transvenous endocardial electrode permits treatment of complete heart block with minimum risk, especially in elderly patients.

DIABETES MELLITUS IN CHILDHOOD

Although diabetes mellitus is uncommon in childhood and rare in infancy, the very nature of the disease, the problems of its management and the seriousness of its complications give it an importance that far exceeds its incidence. A recent report of the experience with diabetic children on the LSU pediatric service at Charity Hospital, New Orleans, during the period 1953-1967 should be helpful to physicians who are called upon to manage young patients with this disease.*

According to the report, less than one per cent of the diagnosed diabetics seen at Charity Hospital are under 12 years of age. The experience with, and the details of management of 31 diabetic children cared for during the 14-year period are reviewed. Of the 31 children, 15 were of the white race—10 of them males and 5 females. Of the 16 non-whites, 4 were males and 12 females. The equal racial distribution contrasted with the total hospital population, 80 to 85 per cent of which is non-white. The striking preponderance of females in the non-white, and the reverse in the white children were unexpected findings. The age at onset of symptoms varied from four months to 12 years, and averaged seven years. Although a family history of diabetes was elicited in almost three-fourths of the patients, overt diabetes was not present in any of the parents, and was discovered in only two siblings. The affected relatives were usually grandparents, uncles, aunts or cousins.

The classical symptoms and findings of polyuria, polydipsia, glycosuria and a blood glucose in excess of 250 mg. per cent were present in

* Rosenbaum, P.: Juvenile diabetes mellitus at Charity Hospital. J. LOUISIANA M. SOC., 119:389-393, (Oct.) 1967.

over 94 per cent of the patients on admission. Weight loss had occurred in 84 per cent, acetonuria in 84 per cent, and dehydration and acidosis in 81 per cent. Infection was present in 74 per cent of the group, but in most cases it was minor in nature. Polyphagia was elicited in somewhat more than half of the patients. One-fourth of the group were admitted in coma. The high incidence of severe acidosis and coma on admission was attributed to the failure of the parents to recognize the significance of the cardinal symptoms of the disease, and a consequent delay of several weeks in seeking medical help.

During the period of study, a variety of clinical conditions were encountered, which necessitated a consideration of diabetes in the differential diagnosis. These included varying combinations of coma, acidosis, dehydration, hyperglycemia, glycosuria and ketonuria. Representative problems in differentiation were encephalitis, meningitis, meningococcemia, head trauma, salicylate poisoning, lead poisoning, intravenous fluid therapy with glucose solutions, etc. Definitive diagnosis was based on the characteristic symptoms and laboratory findings of hyperglycemia, glycosuria and acetonuria, and the response to therapy and a continuing need for insulin.

As pointed out by the author, the particular program used in the management of the juvenile diabetic depends on the criteria for control that one selects. In the Charity Hospital regimen for the management of the juvenile diabetic, the aims of therapy are as follows:

1. Well-balanced, unweighed, unmeasured diet
2. A single morning dose of NPH insulin
3. Normal growth
4. Freedom from ketonuria, nocturia, acidosis, hypoglycemic reactions and repeated infections
5. Adequate urine testing and follow up
6. Self-reliance commensurate with age
7. Well-adjusted status
8. Prevention of vasculopathy.

Hospitalization was considered necessary for all patients in order to establish the diagnosis, to provide emergency therapy, to establish a stable regimen, and to educate the mother and the child in the principles of successful management.

The diet provided well-balanced meals three times a day, and mid-afternoon and bedtime snacks. The weighing and measuring of food were not recommended. Sweets were permitted in moderation, as they are with normal children. The liberal diet and the provision for snacks almost completely eliminated the problem of cheating on food, with its resultant feelings of guilt.

It is emphsized that all children with overt juvenile-type diabetes require insulin, for oral hypoglycemic agents have proved ineffective. Initial stabilization was accomplished by administering regular insulin, and then a single injection of NPH insulin before breakfast was substituted. On initial discharge from the hospital, the patients' mean daily requirement of NPH was 19 units, but it varied from 5 to 50 units. Subsequently there was an increase to a mean of 43 units, and a range of 9 to 100 units, at the last recorded visit. The mean interval between the patients' first and last visits was five years, and it varied from three months to 11 years.

It was found that the insulin requirement tended gradually to increase with age. Following the initial discharge from the hospital, there usually was a decrease that lasted for several weeks, a temporary rise in insulin requirement at puberty was a common observation. The dosage of NPH in each patient was adjusted, as necessary, to provide a feeling of well-being, an absence of hypoglycemic reactions, a normal gain in height and weight, a minimal amount of nocturia, some glycosuria during the day, and an absence of ketonuria. Hypoglycemic reactions were rare, and almost all of them were controlled by the administration of sweetened orange juice. Readmission for acidosis was rare except in infants, and in those instances it had usually been induced by infection. Infections at the site of insulin injection were extremely rare, and their rarity was attributed to the sterilization of syringes and needles by boiling them in a strainer suspended in a pan of water.

The regimen included the recommendation that the urine be tested at least two or three times daily by Clinitest and Acetest tablets, and that the results of the tests be recorded so that they could be checked at each clinic visit. All patients were followed in the clinic

at least every three months, and more often if necessary, particularly in the event of any illness. Parents were encouraged to confer with the clinic whenever problems developed. The children were usually able to administer their own insulin and to test their urine safely and accurately after the age of 10 years, and they were encouraged to do so. They appeared to be well-adjusted youngsters, they made normal gains in weight, and their progress in school was adequate.

The author emphasized that in the child with established diabetes, the development of severe acidosis and coma can usually be averted by *prompt* attention to intercurrent infections, by adding regular insulin to control excessive glycosuria and persistent ketonuria, and by urging a high oral fluid intake. However in patients with impending coma or with an inability to drink sufficient liquids, therapy with intravenous fluids is a necessity.

In the series of 31 patients, 26 per cent were admitted to the hospital in coma. There were two deaths, and in both cases there was massive cerebral edema with herniation of the uncus or cerebellum. Hypoglycemia and hypokalemia in the course of intravenous therapy for acidosis were uncommon problems.

In a discussion of the avoidance of saturated fat and sucrose in the diet of the diabetic child, in an effort to prevent the development and progression of vascular disease, the author suggests that it would seem wise to preach and teach restraint regarding these dietary components, both for the diabetic and for the normal child.

It was pointed out that no one single method of management of diabetic acidosis is universally accepted. The method employed at Charity Hospital is based on frequent clinical appraisals of the child, the use of neutral fluids, the early administration of glucose and potassium, the administration of liberal amounts of regular insulin, the dose depending upon the amount of glucose in the urine and the degree of ketosis. The routine use of alkali therapy is looked upon with disfavor because of the resulting rapid changes in blood pH and serum potassium.

The author declares that because of the infrequency of juvenile diabetes and the paucity of experience that the average physician has had in its management, it is incumbent upon those who take care of the occasional child with this disease to become thoroughly familiar with at least one method of therapy

THE PATHOGENESIS OF PULMONARY TUBERCULOSIS IN THE ELDERLY

A challenge to the commonly accepted and long-held concept of the pathogenesis of sporadic cases of pulmonary tuberculosis, particularly in previously healthy older persons, by Dr. William W. Stead, of Milwaukee, deserves the attention of clinicians, and suggests a reexamination of long-established views and practices in the diagnosis of that disease.*

According to Dr. Stead, it is not unusual for physicians to discover sporadic cases of pulmonary or other forms of tuberculosis in elderly people in whom a recent exposure to an open case of tuberculosis appears highly unlikely. Occasionally autopsy reveals active tuberculosis as the cause for an unexplained illness in a person who has had no demonstrable source of exposure in his environment. If the disease is extrapulmonary, it is ascribed to the late progression or exacerbation of a dormant infection—i.e., it is thought to be endogenous in origin. However, if the infection is within the lung, the concept has been that it is the result of reinfection or superinfection of exogenous origin in a person who acquired tissue hypersensitivity as the result of a primary infection, perhaps many, many years earlier.

As Dr. Stead points out, over 90 per cent of primary tuberculous infections in man heal, leaving the individual with a positive tuberculin reaction and perhaps a small area of pulmonary calcification as the only apparent residuals. The concept that subsequent reinfections constitute the greatest threat to man because of tissue hypersensitivity induced by the primary infection has been ably taught and defended by Dr. J. Arthur Myers, and has for the most part met with acceptance.

* Stead, W. W.: Pathogenesis of sporadic case of tuberculosis. NEW ENGLAND J. MED., 277:1008-1012, (Nov. 9) 1967.

Exceptions have been taken to the significance of a positive tuberculin test, one school insisting that tissue sensitivity is a distinct liability, whereas the proponents of bacillus Calmette-Guerin (B.C.G.) vaccination present evidence to support the concept that there is a reduction in both the incidence and the seriousness of infections following its use.

Dr. Stead also points out that experimental reinfections in animals are difficult and require a significantly larger inoculum than the primary infection. If man resembles animals in this respect, it would appear that the source of reinfection should be easier to identify than the source of the primary infection. The source of a large inoculum would almost have to be patients with open pulmonary cavities discharging large numbers of acid-fast bacilli. This would suggest that a high incidence of drug-resistant infections among adults presents a serious problem within a few years after the introduction of antituberculosis chemotherapy, permitting inadequately-treated patients to reinfect persons about them. A low incidence of drug resistance in new cases of tuberculosis has been found in this country, and would appear to negate this premise.

Dr. Stead, professor of medicine at Marquette University and medical director of Muirdale Sanatorium and chief of the Medical Chest Service at Milwaukee County General Hospital, prompted by inconsistencies of exogenous reinfection as an explanation for chronic pulmonary tuberculosis in man, has devoted his efforts to the solution of this problem over a period of several years. He has recently reported his observations and his deductions in support of another mechanism for the development of clinical tuberculosis.

In support of his thesis, Dr. Stead reports observations from his own experience. In a group of 136 tuberculous children, most of them with primary disease, an open case of tuberculosis was found in the environments of 112 (82 per cent) of them. Among 60 young adults with primary tuberculosis, a recent contact with an open case of the disease was demonstrated in 35 (59 per cent) of them. By contrast, in only six of 178 (3.4 per cent) older adults with chronic pulmonary tuberculosis could a history of recent exposure to an open case be elicited. These data indicate that in primary tuberculosis, in which an exogenous source of bacilli is essential, the source of the infection can be readily identified, whether in children or young adults. He then points out that if chronic tuberculosis is caused by exogenous reinfection, it should be easier to identify the source than it is in primary infections because of the larger inoculum required to overcome the immunity conferred by the primary infection. The facts are that in this country, today, in adults with chronic infections, a history of recent exposure to an open case is quite uncommon, suggesting that some other mechanism must be involved in the pathogenesis.

Another significant observation, according to the Milwaukee physician, is that in 1945 only 30 per cent of the patients admitted to Muirdale Sanatorium were over 50 years of age, and the figure increased to 53 per cent in the years 1964-1966. Thus the reduction in total admissions has been due, for the most part, to a lowering of the number contracting the disease under the age of 50. Though fewer patients with active tuberculosis at ages in excess of 50 are being admitted, the decline in the numbers of such patients is much smaller than the decline in the younger age group. This, Dr. Stead asserts, suggests that clinical tuberculosis is the result of a late progression of an infection acquired years earlier, when the disease was more prevalent.

Of the 241 patients over 50 years of age who were admitted to the Sanatorium in the years 1964 to 1966, only 63 (26 per cent) were aware that they had had an earlier episode of clinical tuberculosis in their adult lives. In 178 (74 per cent) of the group, the present episode of tuberculosis was the first one, to their knowledge. A careful search uncovered x-rays in 128 (81 per cent) of the cases taken at least one year before admission. In 20 instances (16 per cent), the x-ray films were normal, except perhaps for a calcified Ghon tubercle. In 109 patients (84 per cent), some nodular or linear scars were observed, usually in the upper lobes. These findings were suggestive of healed tuberculosis, and they had been present for at least a year and often for five to 25 years before the appearance of clinical tuberculosis, and despite the absence of any known previous tuberculous infection. Thus, in a total

of 205 patients on whom old films were available—77 with known histories of tuberculosis plus 128 others—there were 185 (90 per cent) on whom x-rays showed evidence of tuberculosis at least one year before the development of chronic clinical TB.

Also in support of his thesis, Dr. Stead summates two articles from the British literature and one from the Danish which related the antecedent tuberculin status to the development of clinical tuberculosis according to the degree of exposure. These data indicate that a heavy exposure to open cases of tuberculosis is very hazardous to those with negative tuberculins, but that it has little effect on those who have acquired tuberculin sensitivity as a result of a primary infection. These reports suggested that tuberculosis developed in the tuberculin reactors more as a sporadic disease than as the result of reinfection from an exogenous source. The author also quotes from a 12-year study of an epidemic of tuberculosis in a state school reported by Hyge. Among those who were originally tuberculin negative, the majority of cases of tuberculosis developed within two years of exposure. By contrast, in those who were already tuberculin positive when exposed, the cases of active tuberculosis appeared in a sporadic manner, quite unrelated to their exposure to a tuberculous teacher.

The author emphasizes that once tubercle bacilli have entered a human host and have established lesions, no further exposure is necessary for the development of destructive disease, either within a short time or after a considerable dormant period. Man has a unique relation with this organism in that the primary infection is usually overcome without an eradication of the bacilli. Unfortunately this cannot be demonstrated in the laboratory animals because of their shorter life spans. Complicating the picture in man is the impossibility of excluding the chance that reinfection has played a role in the development of progressive disease long after the primary infection has healed.

In support of the concept of the development of endogenous destructive tuberculosis years after a documented primary infection, the case of a young man in whom this is believed to have occurred is related by the author. The circumstances in the case appeared to preclude the possibility of exogenous reinfection. The patient, because of extensive brain damage, had been cared for by a very small group of people in an appropriate institution for the entire period. All of the personnel and inmates had normal annual chest x-ray films, only 7 per cent of the inmates reacted to tuberculin, and repeated testing revealed no new reactors—all of which demonstrated an absence of bacilli in the patient's environment. Nevertheless at 19 years of age, 17 years after his primary infection, the patient developed destructive pulmonary tuberculosis in the left upper lobe. The primary infection had been located in the right middle lobe and the hilar glands.

In discussing the subject, the author asserted: "It appears that the role of exogenous reinfection in the development of chronic and progressive pulmonary tuberculosis in man has been greatly exaggerated." He proposed that it is much more likely that, as is the case with extrapulmonary lesions, chronic pulmonary tuberculosis develops as a late recrudescence of dormant foci of infection distributed in the course of the primary infection.

Although certain aspects of the pathogenesis of chronic post-primary tuberculosis are not entirely clear, certain formulations can be made from the observed facts, according to Dr. Stead. Since it is an air-borne infection, primary tuberculosis usually occurs in the middle and lower portions of the lung, where ventilation is greatest, and occurs but seldom in the poorly ventilated apexes. During the initial implantation of tubercle bacilli there is no immediate tissue response, and the organisms multiply with little to deter them, in both the lungs and the hilar lymph nodes, until tissue hypersensitivity and immunity develop. It is during this initial period that there is a wide dissemination of organisms, their fates depending upon conditions favorable or unfavorable to their growth and multiplication. Despite meager ventilation at the apex of the lung, it is there that metastatic bacilli most commonly flourish. There the oxygen tension is higher than in any other part of the body because of a high ventilation-perfusion ratio, and there the oxygen-dependent tubercle bacilli are provided a favorable environment. Late tubercu-

losis may occur in other sites that also provide a high oxygen tension—the kidney, brain and ends of rapidly-growing long bones.

According to the author, it is probable that the metastatic apical lesions progress only briefly, but enough to cause small foci of caseous necrosis. With the development of specific tissue immunity and allergy, which occurs usually within a few weeks in response to the primary infection, these apical lesions are aborted. In the event immunity is inadequate, the infection may progress either at the primary site or at the metastatic site, resulting in either miliary or chronic pulmonary tuberculosis. It is in infancy that miliary tuberculosis is the more common type, and progressive pulmonary disease occurs among young adults. On the other hand, if the immunity proves to be adequate—and it usually proves adequate—the primary lesion and the metastatic lesions regress and "heal." Healing, Dr. Stead reports, is usually more complete in the primary site than in that of the apical metastases. The calcified primary lesions rarely contain tubercle bacilli. Perhaps 5 per cent of them do. However, many "healed" apical foci (about 40 per cent) contain them, even decades after the initial implantation. It is the residua of apical metastases of the primary infection which have been termed "Simon foci" and which play a significant role in the pathogenesis of reinfection tuberculosis.

The author asserts that the evidence presented indicates that exposure of tuberculin reactors does not cause significant reinfections under natural circumstances, either in laboratory animals or in man. From his observations he deduces that the chronic form of pulmonary tuberculosis appears to be the result of progression or recrudescence of foci implanted in the course of the primary infection. He thus subscribes to a unitary concept of tuberculosis in man. Although what triggers such a late recrudescence of disease in man is unknown, it is most commonly seen in association with other chronic diseases. He likens the natural history of tuberculosis to that of syphilis, and Brill's disease, a recrudescence of old-world typhus fever. Like syphilis, the primary infection is usually relatively benign and heals without serious consequences despite wide dissemination of organisms that may cause disease in almost any organ many years later. Brill's disease is a rickettsial infection of which body lice are the vector. It is characterized by an acute febrile illness that may either subside or be fatal. In those who survive it, the organisms may persist and give rise to a recrudescence even decades later, despite the absence of the vector and the etiologic agent in the environment.

Dr. Stead asserts that the acceptance of a unitary concept of tuberculosis in man requires a reexamination of several long-established views and practices in the diagnosis of the disease:

1. Instead of considering a positive tuberculin reaction as indicating some vague prior exposure to tuberculosis, it should be recognized that definite tuberculin hypersensitivity (10 mm. reaction to 5 T.U. of tuberculin or intermediate-strength PPD) usually is indicative of tuberculous infection in the body. It should be realized that chronic tuberculosis may develop in any reactor at any time, even in the absence of reexposure to a person with open tuberculous disease. Tuberculin testing should be made a part of routine health examinations so that effective preventive measures can be carried out.

2. The tendency of radiologists to look upon fibrotic apical scars as insignificant healed residua needs revision. Such scars should be recognized as foci with a potential for late recrudescence, which may lead to active, destructive and communicable disease. The presence of stable apical scars calls for continued x-ray surveillance, not only for months but for life.

3. The chances of development of progressive tuberculosis is increased in reactors whose nodular residua can be identified on chest x-ray. This is particularly true in young adults between the ages of 16 and 35, in the elderly, and in patients with certain associated conditions—alcoholism, diabetes, silicosis, prolonged steroid therapy, etc. In fact, Dr. Stead asserts, the risk is so great in reactors with nodular scars and one of the predisposing conditions that prolonged isoniazid prophylaxis should be considered!

4. The danger to close contacts of a newly-discovered case of communicable tuberculosis varies widely. The greatest hazard is to

young persons—to the grandchildren of patients or to tuberculin-negative nurses. The presence of a positive tuberculin in a recently exposed young adult is a strong indication for the administration of isoniazid prophylaxis for a year, unless it is known without question that the positive reaction is a long-standing one.

5. Much greater attention should be given to the determination of the tuberculin status of personnel in hospitals and nursing homes, so that recently-acquired infections can be detected by periodic tuberculin testing, particularly in the event of inadvertent exposure to an open case of the disease. The use of prophylactic isoniazid in those with recently acquired infections is strongly advocated. The author also advises that when it is necessary to expose tuberculin-negative people to open tuberculosis, they should be protected by B.C.G. vaccination or followed very carefully and given frequent tuberculin tests so that subclinical infections can be promptly recognized and treated prophylactically with isoniazid. This precaution applies particularly to persons employed by tuberculosis sanatoria and to military recruits and Peace Corps workers in areas where tuberculosis is prevalent.

Although the unitary concept of chronic pulmonary tuberculosis as presented by Dr. Stead appears convincing, the clinician and the public-health physician are still obligated to search for possible sources of reinfection. It is difficult to erase the memory of children with tuberculous meningitis and young adults with progressive pulmonary disease infected and reinfected by a grandparent or an aunt or uncle with cavities the size of golf balls and sputum teeming with acid-fast bacilli!

THE YOUNG AND THE HAPPILY NOT-SO-YOUNG

In a Christmas letter from a young couple who are on their first assignment in the State Department's foreign service, there was a brief story of their many interesting and provocative activities. One paragraph told of their participation in a discussion group on the subject "Youth and Society—Turned On or Dropped Out." Though they are still in their twenties, their reactions reflect a maturity and a critical sense that unfortunately are sadly lacking in many young people today:

"It has been our near-undoing to discover that we are of 'another generation' and to think that we might not have anything meaningful to say to today's youth. Most of all, we are disturbed with the attempts of some to substitute drugs for the experience of discovering life's ecstasies through one's own imagination. If more than a small handful believe that either to discover their personal integrity or to make a contribution to humankind they need the 'freedom-froms' gained through drugs, with their consequent unpredictable dangers, more than the 'freedom-fors' gained through commitment to people they love and truths they espouse, then we think American society needs pragmatic administration of economic opportunity *plus*. The impelling question is, 'What institutions will step forward to provide this *plus* —old ones with renewed purposefulness or new ones?' "

MEDICAL ABSURDITIES IN MASS-CIRCULATED MAGAZINES

A physician's column in a current women's magazine contains a short paragraph on the subject of bed-wetting: "Bed-wetting is probably caused by an allergy, as if the bladder were sneezing."

Another "scientific" gem was the advice that it is unnecessary to keep a child with mumps in bed, for the complication of prostatitis does not occur before the age of puberty.

Then we wonder why laymen are misinformed in matters relating to health!

President's Page



What is a Hospital?

It's perhaps many things to many people. Small or large, it is a complex institution. Quite obviously, it is important that within its walls the best possible medicine be practiced.

At the board of directors level, resolution of a bewildering complexity of problems requires the united efforts of many people with broadly varied backgrounds, qualifications, and experience.

Have you ever wondered, then, why so many hospital governing boards include in their membership no one who is qualified to operate a medical institution or to practice medicine?

Can governing boards formulate hospital policy and make management decisions conducive to the best possible conditions for medical care when participation by individuals knowledgeable in the practice of medicine is merely advisory?

What would you think of a bank with no bankers on its board of directors? Would you put your savings in that bank?

At the national level, the House of Delegates of the American Medical Association has recently reaffirmed its position that physicians should seek membership on hospital governing boards.

At the local level, when are we going to begin to let people know that a hospital governing board with no physician members is not soundly constituted?

R. F. Birge

President

THE JOURNAL *Book Shelf*



BOOK REVIEWS

PALLIATIVE CARE OF THE CANCER PATIENT, by 33 authors; edited by *Robert C. Hickey,* M.D. (Boston, Little, Brown and Company, 1967. $23.50).

One approaches a review of this text in a friendly frame of mind. A third of its 33 contributors are, or have been, faculty members at the SUI College of Medicine. Other authors are mainly from Wisconsin, Texas, and Oregon, and all are teachers with a special interest in the problem of cancer. Their effort to offer "Palliative Care of the Cancer Patient," is timely and useful, and reflects their enthusiasm as they attack their patient's difficult problems, but the reader is faced by the conclusion that their experiences do not seem to be much different from those of other physicians who are concerned routinely with such patients.

By definition, palliation is treatment for relief (of disease) without hope or expectancy of cure. Hickey emphasizes the proper diagnosis and care of the patient's primary disease. If such procedures fail, most of the other authorities seem to agree that further surgery, greater radiation dosage, and at times chemotherapy may give the patient some relief of pain, may add a few months more to his life, and possibly may make the interval more easily bearable. Other sections of the book point out such factors in treatment as proper nutrition, treatment of secondary symptoms, help in maintaining rapport between the physician and the patient and his family, and other similar features of patient care. Generally, the authors urge the need for this added interest in the patient and for doing of what can be done, even if his disease is progressive and incurable. These points are not new, and their use is commonplace to most practitioners.

Perhaps the most valuable feature of the book is that the various authors discuss their experiences by system, according to their respective specialties. The reader is alerted to the manifestations of localized recurrences and the evidence of disseminated spread of each type of primary tumor; particularly, the authors relate this sequence in their own series of cases. This information will be of value to the reader as he observes his own patients. The book suggests that too often after being determined, the progressive disease needs treatment under the direction of a specialist who can develop some more heroic type of attack on the situation. The book makes many generalizations as to what that new attack may be.

One cannot say that the book is full of practical ways in which a practicing physician not affiliated with a cancer-treatment center can relieve the disease, or even its symptoms. Probably the editor did not mean his text to do those things. Some comfort will accrue to the reader, however, if he can be reassured that, even in the face of impending disaster, there are methods available which may modify the patient's future and add to his comfort and peace of mind.—*Robert N. Larimer,* M.D.

ROENTGENOLOGIC DIAGNOSIS, VOLUMES I AND II, by *J. George Teplich,* M.D., *Marvin E. Haskin,* M.D., and *Arnd P. Schimert,* M.D. (Philadelphia, W. B. Saunders Co., 1967. $38.00).

This two volume edition of DIAGNOSTIC RADIOLOGY, by Teplich, Haskin and Schimert is designed to complement A TEXT BOOK OF MEDICINE, by Beeson and McDermott. The material is therefore arranged more in conformity with a medical text than with the usual radiologic text. The table of contents lists diseases by systems, and also by broad disease groups such as hereditary diseases, infectious diseases, endocrine diseases, etc. The roentgen manifestations and findings are well demonstrated and discussed. There are nearly 2,000 roentgen illustrations, and the quality of reproduction is good.

The unique organization of material is the chief characteristic as well as the appealing feature of this work. It should be of particular help to residents in medicine and radiology, and also to the practicing internist, but it probably adds little to the practicing radiologist's library, since it is merely a compilation of radiographs presented to illustrate the roentgen findings in a long list of disease entities, all of which are included in standard radiology texts. As indicated, these are presented in a manner much more suited to the internist's approach to a clinical problem than to the radiologist's approach to specific film interpretation.—*L. L. Maher,* M.D.

MILD MENTAL RETARDATION: A GROWING CHALLENGE TO THE PHYSICIAN (New York, Group for the Advancement of Psychiatry, 1967. $1.00).

Rarely has more sensible and usable information concerning an important sector of our population—namely the mildly retarded—been packed into a smaller space. This pamphlet is published by the Group for the Advancement of Psychiatry, an organization made up of some of the nation's most distinguished psychiatrists.

The fundamentals of mental retardation are adequately discussed—such as diagnosis, psychopathology, etiology, prevention and treatment. The significance of a large and much neglected group of individuals is put into sharp focus, and that is important, for the mildly retarded individual frequently has considerable potential, and yet fails to receive the attention which is given to the more severely retarded.

One needs only to remember that 85 per cent of such

(Continued on page 186)

Dear Doctor:

Wouldn't you like your patients to learn more about the contributions made by the world of medicine to their welfare? So that they can better appreciate the efforts of the health team to keep them in good health?

To tell the stories of medical and pharmaceutical advances to people throughout the country, the Pharmaceutical Manufacturers Association is sponsoring a unique "magazine within a magazine." It is called *Medicines and your family's health* and the first issue appears in the November *Reader's Digest*.

We would like to send you 50 free reprints of *Medicines and your family's health* for use in your reception room. Your patients will find the articles in this issue factual, educational and of immediate personal interest.

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Mediatric® can help them lead a more active, useful life.



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Commonly heard complaints from your geriatric patients may indicate an underlying disorder that may require immediate attention—and definitive therapy. But, with or without an underlying functional illness, the patients' physical and emotional well-being may be enhanced by adjunctive steroid-nutritional therapy. That's why so many patients just like these are suitable candidates for MEDIATRIC from their very first visit.

"A steroid-nutritional compound (Mediatric) was used in 100 patients to relieve some of the symptoms caused by degenerative changes of aging...." This therapy resulted in improvement of 75 per cent of the patients.

McNeill, A. J.: Clin. Med. *8*:518 (Mar.) 1961.

The estrogen component is PREMARIN® (conjugated estrogens—equine), the orally active, natural estrogen most widely prescribed for its physiologic and metabolic benefits. The combination of estrogen and *methyltestosterone* can help maintain an anabolic balance to forestall premature estrogen-related degenerative changes.

MEDIATRIC also supplies a small amount of *methamphetamine* to provide a gentle mood uplift; and nutritional supplements specially selected to meet the needs of the aging.

MEDIATRIC helps keep the older patients alert and active; helps relieve general malaise, easy fatigability, vague pains in the bones and joints, and lack of interest so often associated with declining gonadal hormone secretion.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.

WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

SUGGESTED DOSAGES: **Male and female:** 1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).

In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

SUPPLIED: No. 752 – MEDIATRIC Tablets, in bottles of 100 and 1,000.

No. 252 – MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.

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Steroid-nutritional compound	Each MEDIATRIC **TABLET or CAPSULE** contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC **LIQUID** contains:
Conjugated estrogens—equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	–
Thiamine HCl	–	5.0 mg.
Thiamine mononitrate	10.0 mg.	–
Riboflavin	5.0 mg.	–
Niacinamide	50.0 mg.	–
Pyridoxine HCl	3.0 mg.	–
Calcium pantothenate	20.0 mg.	–
Ferrous sulfate exsiccated	30.0 mg.	–
Ascorbic acid	100.0 mg.	–
		(Contains 15% alcohol)

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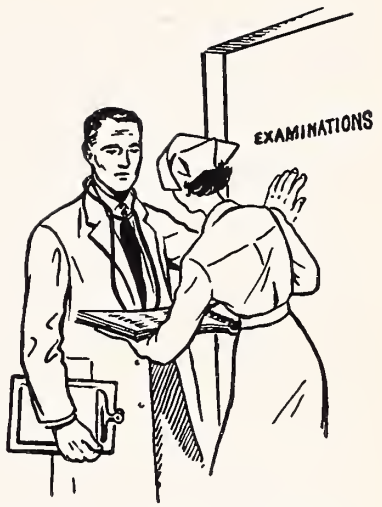
who goes for checkups?

A vital question. For if early diagnosis and treatment can cure cancer, obviously regular health checkups are essential. In a survey conducted for the Society, we discovered that only 26% of those questioned had such regular checkups. But 90% said, *if their physicians told them to do so,* they would have annual checkups.

This confirmed what we have long known—your key role, doctor, in *activating* your patients in good health practices. We alert the public with facts about cancer. You follow through by urging regular checkups. A life-saving combination.

AMERICAN CANCER SOCIETY.

THE DOCTOR'S BUSINESS



Office Equipment

LARRY E. LEAVERTON
Des Moines

One of the most important investments a doctor will make is in equipping and furnishing his office, for many people will judge him initially by the appearance of his office and by the quality and efficiency of his office equipment.

For the established doctor, purchases of new equipment are occasioned by expansion of facilities, obsolescence, renovation, or a desire to use new items that have recently been put on the market. The patient expects a modern up-to-date office, and the doctor will benefit by increased efficiency through equipment of the time-saving variety.

In the business office there is a trend toward counter-type work areas replacing conventional desks. Adjustable posture chairs will increase the assistants' efficiency. With the volume of paperwork increasing, serviceable standard electric typewriters are recommended for greater speed and less fatigue.

For the filing of case histories, there is a trend toward open-shelf or shelf files. If one is to use conventional three-, four- or five-drawer file cabinets, it is mandatory for him to provide room for pulling out the drawers, thereby doubling the amount of space necessary. Drawers must be opened and closed each time a file is put in or taken out. Because the file folder must be read from the top, filing cannot be done above eye level, and only one girl can use one file cabinet at a time. Shelf files save both space and time. Visibility of the files speeds both filing and retrieval. Color-coded tabs further increase filing efficiency by reducing the amount of misfiling. Shelf files can be purchased with doors and in decorator colors.

A fire-resistant file is important for protection for accounts receivable and other valuable records. If trays are used for accounts receivable, the trays should be tightened at night to make them resistant to fire.

The copy-machine industry is booming. A recent study indicates that present-day equipment of this sort turns out some 17 billion copies a year. Copier-duplicators disgorge another 18 billion. The Administrative Management Society's annual report on copy machines lists 179 different models. Which machine is best for the average medical office? It depends on the use that is to be made of it and the numbers of copies desired. If it is to be used chiefly to copy patients' ledgers for statements, the machine selected should provide a dry copy with reasonable speed at a reasonable cost. For general copying, clearness of the copies might be more important than the speed with which they can be made. The most popular are the dry-heat type, where infra-red rays pass through heat-sensitive copying paper to the original, and the electrostatic, where electrically charged powder, taking up the markings on the original, is fused to the copying paper.

Dictating equipment is being used by more and more doctors for reports, histories and correspondence.

Other items in the timesaving category are intercommunication systems—through the telephone system or independently—alphabetical sorters for refiling histories, electric letter-openers, postage meters, disposable syringes, gloves, sheeting, etc., and pegboard systems for efficient posting and billing.

The latest in medical equipment and facilities that will aid in the diagnosis and treatment of increased number of patients are also necessary.

The question is often asked, "Should equipment be leased or purchased?" In general, it is almost always preferable to purchase the equipment one needs rather than enter into a leasing arrangement. A leasing arrangement will usually cost more, even if a purchase would require the borrowing of money. Obsolescence and tax considerations usually are not factors. In most leases one is obligated to complete the length of lease. Lease payments on business equipment are deductible, but so is the cost of purchased equipment, through annual depreciation. In comparing the cost of a lease proposal with the cost of owning a piece of

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

equipment, it is wise to list the entire amount that must be paid under the terms of the lease, compared with the purchase price of the equipment including interest that must be paid if the amount is borrowed, or the interest income that will be lost if cash is paid, since the money could be producing income if invested elsewhere.

When purchasing office or medical equipment, a doctor should always deal with reputable, reliable firms that he can trust. He must depend on them to provide him with complete information on their products, and to stand behind their products and provide service whenever necessary.

U. of I. Riding-Mower Accident Study

Forty-five accidents, one of them fatal, involving riding rotary power lawn mowers have been investigated in research being done by the Institute of Agricultural Medicine at The University of Iowa. Victim of the fatal injury was a four-year-old girl who was playing 45 feet from the mower. A piece of wire thrown from the mower struck a vehicle, ricocheted, and punctured the girl's skull. She died within 24 hours. A report on the research was recently presented to the winter meeting of the American Society of Agricultural Engineers in Detroit by William H. McConnell, a safety engineer with the Institute's Accident Prevention Section.

The report is the first by the Institute on *riding* rotary mowers, now being used more frequently on farms, suburban acreages, and in cities. Safety studies have been done by the Institute for several years on *non-riding* power mowers. Riding mower accidents studied in eastern Iowa injured 35 mower operators, 8 bystanders, and 2 passengers. Thirty-one of the injured were male, and 14 were female, Mr. McConnell said.

"Seven of the injured were children five years old or younger and six of them were injured when the mower was backed over them. All six suffered amputations, with surgical amputation of the leg necessary in two cases," he said. Amputation was the most frequent injury, with 20 of those injured suffering amputation of toes, fingers, and legs. Other injuries included cuts, fractures, punctures, burns, and rupture.

"Riding mowers are considerably more complex mechanically than hand-controlled mowers and require more operator skill," Mr. McConnell stated.

"The experience level of the operator with the mower he was using was found to be a factor in nine accidents studied. In four instances it was the first time an operator had used the mower. In the others the mower was either being used on trial or was being used for the first season."

A new accident factor peculiar to the riding mower—stability of the machine—was involved in nine accidents studied, Mr. McConnell said. "Stability becomes a problem when we consider that riding mowers can vary in weight from 150 to about 750 pounds, and that they carry operators who may vary in weight from as little as 60 to as much as or more than 200 pounds. Obviously, the addition of a rider to a mower results in a rearward and upward displacement of the center of gravity. This displacement has been a contributing factor in a number of bizarre accidents that have occurred on sloping terrain. Occasionally, the operators who had accidents appeared to revert to patterns of behavior learned on the tricycle by putting a foot down or jumping off when they felt insecure on the machines," he reported.

In addition to increasing the stability of the mowers, Mr. McConnell suggested several other changes that designers might make to help reduce the potential for error on the part of the operator. Changes should include an automatic and rapid brake for the mower blade, more adequate fenders and shielding, a way to prevent operators from getting on or off the machine on the discharge-chute side, and standardization of control position and movement, Mr. McConnell said.

The U. of I. study was supported in part by funds from the Outdoor Power Equipment Institute, Washington, D. C., and the Injury Control Program of the U. S. Public Health Service.

Iowa Lutheran Hospital Day

Des Moines, March 20, 1968

AFTERNOON PROGRAM, IOWA LUTHERAN HOSPITAL NURSES' AUDITORIUM

1:00 p.m. WELCOME—William Shinkle, M.D., Des Moines

1:15 p.m. "Automatic Multiphasic Screening and Periodic Health Examinations"—Nathan L. Morgenstern, M.D., pathologist at Kaiser Hospital, Oakland

2:30 p.m. "Treatment of 1,000 Burn Patients with Sulfamylon Acetate Cream"—John Stein, M.D., captain, M.C., Army Burn Center, Ft. Sam Houston, Texas

3:45 p.m. "Pitfalls in Diagnosis of Endocrine Diseases" —Raymond V. Randall, M.D., endocrinologist at the Mayo Clinic, Rochester, Minnesota

EVENING PROGRAM, FT. DES MOINES HOTEL

6:30 p.m. COCKTAIL HOUR

7:00 p.m. BANQUET—Guest Speaker: Byron B. Oberst, M.D., Omaha pediatrician, "Adolescents and Their Problems, Including Parenthood"

"Why I Said 'Yes'"



Donovan F. Ward, M.D., Dubuque
Past-president, A.M.A.

On August 17, 1967, Dean Robert C. Hardin visited me in my office in Dubuque and outlined for me the short- and long-range plans to establish the Iowa Medical Center as one of the largest and finest in the United States. I was astounded not only at the scope of the plans, but also at the stage to which they have been developed by University administrators and professional planning consultants.

Imagine that by 1971 the current medical complex, a great one by any measure, will be transformed into an integrated Health Sciences Campus with the construction of a $12 million Dental Clinical Sciences Building, a $10 million Basic Sciences Building, an $18 million General Hospital addition, a $2.3 million College of Nursing and a $2 million Health Sciences Library.

In just five years, Iowa will have one of the few medical campuses which integrate major hospital facilities with teaching facilities for the basic sciences, dentistry, nursing, pharmacy, medicine and all the related health sciences. A pedestrian campus will be created—with cars parked in ramps at the periphery. Projections indicate that within ten years more than 12,000 people will be concentrated on the Health Science Campus at mid-day.

Dean Hardin describes the new Health Sciences Library as "the very heart of the Health Sciences Campus plan, both geographically and educationally." Careful site selection will make it possible for the Library to be near the hospitals and the various health science colleges. The location and size of the Health Sciences Library will make it possible for the basic collections of all the colleges to be consolidated in this new facility. It is designed to serve every student, faculty member, resident, and intern and every health science practitioner in Iowa.

I have known, as have all of you who have had health science training at Iowa, the inadequacies of the present Medical Library. Dentistry, pharmacy and nursing have fared little better. Dean Hardin did not need to convince me of the need for a new library.

The expansion of the Health Sciences Center is being provided by a blend of state and federal funds and revenue bonding. (I was surprised to learn that no building on the existing campus has been built entirely with state funds.) After hearing Dean Hardin's explanation, I agreed that the only way that the great need for the Health Sciences Library could be filled in time was through gift funds.

When Dean Hardin asked me to be National Chairman of the campaign to raise funds for the Health Sciences Library, I said "Yes, I would be honored to do so." And I have firmly resolved to support this effort to the limit of my financial ability and to work as National Chairman to assure that the campaign for this vital facility reaches a successful conclusion. I am proud to be playing a part in seeing the dream of this magnificent Health Sciences Library come true.

I hope that every man and woman who has had the advantage of being trained at Iowa in the health science field and every Iowa practitioner of health scienecs will add his or her emphatic "yes" to this effort. The excellence of today will be preserved and enhanced if the friends and alumni of The University of Iowa are willing to accept the obligation of support that alumni and friends of the great private universities have long demonstrated. The Health Sciences Library—designed by one of the outstanding architectural firms in America—will be a source of pride for all of us.

—DONOVAN F. WARD, M.D.

Neuromuscular Diseases of Children

The Cook County Graduate School of Medicine announces a two-week intensive continuing education course in The Neuromuscular Diseases of Children with Special Emphasis on Management, to be given by Dr. Meyer A. Perlstein during the period of June 3-14, 1968. It will be an intensive didactic and clinical course designed for pediatricians, orthopedists, neurologists, psychiatrists and physiatrists interested in the care and treatment of children with neuromuscular handicaps. Emphasis will be placed on the practical clinical aspects of treatment and rehabilitation procedures. The course will include trips to demonstration



Nothing else I've tried seems to work, so I decided to give you a crack at

Some U.R.I. patients are more miserable than others.

That's why we make Novahistine® tablets in two different formulations.

And let you control the dosage.

With Novahistine LP tablets and Novahistine Singlet tablets you have the range and flexibility of decongestant dosage that lets you prescribe for the needs of the individual patient.

Novahistine LP tablets are most useful for relief of nasal congestion in patients without pain or fever.

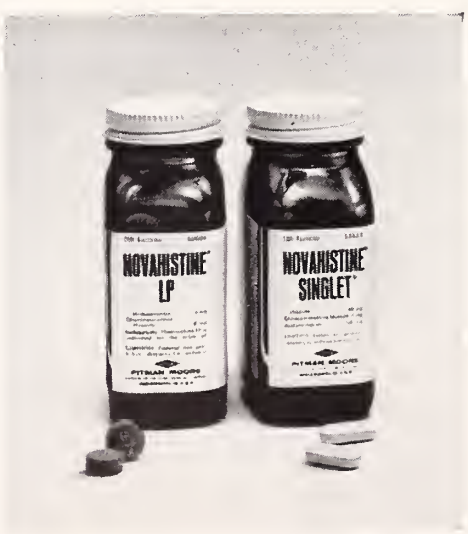
Novahistine Singlet tablets, which provide analgesic-antipyretic effect, as well as decongestant action, are indicated for upper respiratory infections accompanied by pain, aches and fever.

Whether you prescribe Novahistine LP or Novahistine Singlet, a total daily dose of 3 or 4 tablets will usually provide effective, continuous relief.

Use cautiously in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Each Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg.; and chlorpheniramine maleate, 4 mg.

Each Novahistine Singlet tablet contains phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 8 mg.; and acetaminophen, 500 mg.



DOW PITMAN-MOORE DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS

clinics and treatment centers. The fee for the course is $315, and since registration will be limited, applications should be made as far in advance as possible. For further information, write to the Registrar, Cook County Graduate School of Medicine, 707 South Wood Street, Chicago, Illinois 60612.

Course for Doctors Intending to Establish Respiratory-Care Units in Hospitals

On Wednesday, Thursday and Friday, April 17-19, the University of Colorado Medical Center will present a course designed for internists, chest physicians, anesthesiologists and thoracic surgeons who are operating respiratory-care units or are interested in establishing such services at their hospitals. It will be an intensive review of principles and technics in caring for patients in moderate or severe respiratory distress. The subject matter is to include the pathophysiology of respiratory failure, the pathology of the lungs in patients who die in respiratory failure, and the principles of ventilatory assistance, blood gas analysis, airway care and bedside ventilatory evaluation.

The course will stress the team approach to patient care, and nurses working in respiratory care are encouraged to enroll, along with their supervising physician. Nurses will not be enrolled unless their physicians attend. The nurses will attend a two-day review of lung anatomy and physiology on Monday and Tuesday, April 15-16, in addition to the subsequent course. Tuition is $75 for each doctor and for each nurse. Enrollment will necessarily be limited, and advance registration and payment of fees will be required.

Dr. Thomas L. Petty, an assistant professor of medicine and director of the Respiratory Care Laboratory at the University of Colorado College of Medicine, is the director of the course, and Dr. Gustave Laurenzi, of the New Jersey College of Medicine, will be the visiting professor.

Applications should be addressed, and fees sent, to the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver, Colorado 80220.

Three-Day Cardiology Postgraduate Courses Scheduled for 1968 by American Heart Association

Postgraduate courses entitled "Three Days of Cardiology," which are co-sponsored by the American Heart Association's Council on Clinical Cardiology, local Heart Associations and medical schools, are scheduled for 1968 as follows:

February 19-21: New York City, "Cardiac Advances of Current Interest," directed by Charles K. Friedberg, M.D., co-sponsored by New York Heart Association and Page and William Black Post-Graduate School of Medicine of the Mount Sinai School of Medicine.

May 13-15: Hamilton, Ontario, Canada, "Etiology and Treatment of Thromboembolic Disease," directed by J. Fraser Mustard, M.D., W. J. Walsh, M.D., and John B. Armstrong, M.D., co-sponsored by Canadian Heart Foundation and McMaster University.

September 25-27: Cleveland, "Problems Affecting the Cerebral, Renal and Peripheral Circulation," directed by Ray W. Gifford, Jr., M.D., and Victor G. DeWolfe, M.D., co-sponsored by Ohio State Heart Association, Heart Association of Northeast Ohio and The Cleveland Clinic Foundation.

Registration fees for the courses are $50 for Members and Fellows of the Council on Clinical Cardiology, and $85 for non-members. Registration forms may be obtained from the Department of Medical Education, American Heart Association, 44 East 23rd St., New York, N. Y. 10010.

Vitamins B-3 and C Benefit Schizophrenics

The complete recovery or marked improvement of about 80 per cent of 1,500 schizophrenics treated continuously with Vitamins B-3 and C has been reported in 12 independent psychiatric studies sponsored by the American Schizophrenia Foundation. The medication's cost: 10¢ per day per patient! In addition to the vitamins, the doctors reported that their patients were helped by tranquilizers (especially the phenothiazines), antidepressants, electric shock, supportive psychotherapy and, in some cases, special diets to correct hypoglycemia. The consensus of the psychiatrists, however, was that vitamin B-3 and C therapy is "the treatment of choice for schizophrenia *at this time,*" and that those vitamins should be included in any comprehensive treatment program for schizophrenia.

It is reliably estimated, the Foundation said, that 1,500 doctors in the U. S. and Canada, and over 100 institutions, are now using Vitamin B-3 in the treatment of both schizophrenia and alcoholism. Recently the National Institute of Mental Health awarded well over $250,000 to the New Jersey State Hospital at Marlboro for a three-year study of B-3. The Foundation declared, however, that its press release containing the above statements should not be thought to constitute its official endorsement of the vitamin therapy. Rather, it said, with Fordham University during 1968, it will sponsor a special conference on Theory and Therapy in Schizophrenia, at which all points of view will be represented.

Iowa Association of Medical Assistants

Handle With Care!

By the way you handle fees—discuss them, bill patients for them, and follow up on collections—you either strengthen or jeopardize your doctor-employer's public relations. In addition, antagonizing patients can delay payments, but understanding and a pleasant attitude can help to increase the income of the practice.

The medical assistant who is to be responsible for preparing and collecting accounts should be thoroughly briefed, not only on the mechanics involved but also about the doctor's collection philosophies. Left to her own devices, one medical assistant is over-zealous about collections and loses friends for the practice, and another is too timid and doesn't maintain a good collection ratio for her employer.

Sending statements. The statement should tell the patient what services were performed, how much he has paid, what insurance has paid and the balance of his account. If thermal or electrostatic copying equipment is used for sending statements—make sure the copy is clear. Bills should be neatly and accurately prepared and should be sent out on a regular schedule. In most cases the billing is on a monthly mailing schedule, and in large practices the billing is cycled.

Using charge slips. A charge slip is a useful device for keeping track of services rendered to patients. In many practices a small charge slip, in duplicate or triplicate, is attached to the patient's history and is brought to the examining or consulting room when the doctor is about to see the patient. The doctor checks off the type of service he has given, and hands it to the patient at the end of the visit, requesting that it be given to the girl at the desk. When the patient presents the slip, the girl has an opportunity to ask how he would like to handle the account. At the bottom of the charge slip there can be a line for "your next appointment," thereby reminding the patient both of his next appointment and of his account if he has not paid it before leaving the office. A copy of the slip is used in preparing the patient's itemized statement. As an assurance of an accurate account, a duplicate of the charge slip can be sent with the statement. For control purposes, it is advisable to have the slips numbered serially.

Accepting patients' payments. A specific system for recording every payment that comes in, whether it be cash or check, *IS ESSENTIAL.* For example, a patient who pays for his visit before he leaves should be given a receipt. Receipts for all remittances received at the desk during the day should tally exactly, at the end of the day, with the total amount of cash taken in this manner. This is a vital control which helps your employer know that you are doing a good job of keeping track of the cash received from patients. A copy of the charge slip itself can be used as a receipt, or a day sheet or a receipt book containing carbon copies is an acceptable record.

Following up on collections. Your employer will decide upon a procedure that you are to follow in regard to overdue accounts for which circumstances do not warrant special arrangements. He may decide, for example, that a friendly reminder that an account is "overdue" is not offensive at the three-month non-payment level, and that at six months a reminder that the account requires "immediate attention" is justified (which it really is). After a six-month period the medical assistant must know exactly how far she is to go in pursuing the account. Some have used a phone call as a reminder—and successfully, especially if good PR is applied. There are many tactful and otherwise excellent form letters that can be used, and there is a time when the medical assistant must stop her efforts at collecting the account. But all of her actions must be at the direction of her employer.

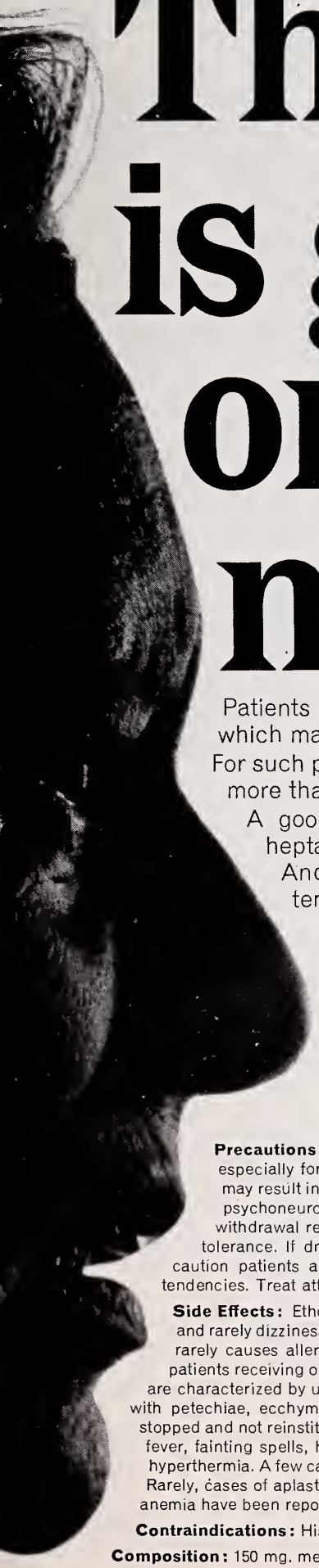
Let me recap this message: There must be an accurate recording of services rendered. Send statements systematically. Use the charge slip. Encourage immediate payment. Follow up on collections. And give a receipt.

—Marian Little

IAMA Convention
Holiday Inn, Sioux City
May 3, 4, 5, 1968

MAKE PLANS NOW TO ATTEND





This pain is getting on my nerves.

Patients in pain often experience concomitant anxiety and tension, which may add to the burden of pain.

For such patients, you may want to prescribe a preparation that offers more than simple analgesia.

A good choice is often EQUAGESIC® (meprobamate and ethoheptazine citrate with aspirin). It helps relieve pain. And anxiety. And skeletal muscle spasm as related to pain or anxiety and tension.

Equagesic® TABLETS
(meprobamate and ethoheptazine citrate with aspirin)

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Precautions: Keep out of reach of children. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate may result in dependence or habituation in susceptible persons—as ex-addicts, alcoholics, severe psychoneurotics. Withdraw gradually after prolonged high dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance. If drowsiness, ataxia or visual disturbances occur, reduce dose. If symptoms persist, caution patients against operating machinery or driving. Give cautiously to patients with suicidal tendencies. Treat attempted suicide with immediate gastric lavage and appropriate supportive therapy.

Side Effects: Ethoheptazine and aspirin may occasionally cause nausea, vomiting, epigastric distress, and rarely dizziness and CNS depression. Overdosage may result in salicylate intoxication. Meprobamate rarely causes allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. Meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioedema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. A few cases of leukopenia, usually transient, have been reported following prolonged dosage. Rarely, cases of aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported; almost always, in the presence of known toxic agents.

Contraindications: History of sensitivity or severe intolerance to aspirin or meprobamate.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa.

Woman's Auxiliary News

Gavel Gabble

"Women take to politics like ducks to water" is the statement made in a bulletin printed by the American Medical Political Action Committee. Did you know that women have an edge over men? In 1958, they outvoted the males. In 1964 they outnumbered the men by more than four million, and in recent elections active women party workers have outnumbered the men by an estimated four to one.

The physician's wife is unusually well-equipped for politics. She is intelligent, educated, ingenious, creative, and tenacious. In most instances, she is more capable than her husband of scheduling her spare time on a regular basis. And like her husband, she is an opinion leader in her community.

During campaigns, the role of the physician's wife becomes increasingly important. As a key member of a candidate-support committee, she is entrusted with the responsibility of enlisting and providing volunteer help for the candidate. Nothing —*nothing*—is more important, for volunteers win votes, and votes decide elections.

There is no end to the number of jobs that need to be done during a campaign. To name a few—people must be found who will hold morning coffee meetings for the candidate, staff telephone committees, speak before women's groups, distribute literature, help solicit funds, canvass the precinct, accumulate voter information, operate Mimeograph machines, stuff envelopes, and type letters. On election day, poll watchers are needed, and people are needed to operate car pools, to baby-sit, to telephone late voters, and to man the campaign headquarters office. The doctor's wife can also enlist neighborhood children to distribute handbills; get the teen-agers to drive people to the polls; and sign up her friends to work for the candidate. The doctor's wife, if she wishes, can be indispensable to the candidate's success.

* * *

What has your Auxiliary done for your community's health improvement this year??? Have you held a health fair, helped with a cancer-detection program, been on a speaker's bureau to address interested groups, furnished package programs to schools, tried furnishing "Emergency Medical Alert" identification tags for those requiring them, helped with a health-related display at state or county fairs, sponsored an essay or poster contest on local health problems, cooperated in screening tests and immunization programs, furnished TODAY'S HEALTH subscriptions to schools, purchased copies of TODAY'S HEALTH GUIDE, or encouraged donors to present them in memory of relatives or friends? If you haven't tried several or any of these ideas this year, how about including them in your plans for next year? Sit right down and write yourself a note to include one, some, or all of these ideas—as your community needs demand.

* * *

For those of you who haven't been able to hold health career days or to organize health career clubs I have another question: Have you ever considered the idea that physicians and their wives should seek appointment to committees and memberships in organizations working to solve these projects? Volunteer to serve on local, county, or state health councils, or help organize them where none exist. We have a health-manpower shortage, as you are well aware. The needs are many: more training facilities and teaching staffs in the ancillary health fields; shortened courses; more on-the-job training; better utilization of skilled workers and relegation of routine duties to the less highly trained; easing of present rules regarding re-training and up-grading; persuading married women to return to work; and scheduling classes when wives and mothers can conveniently attend, so that more health-related subjects may be taught to more adults in the health field.

* * *

Now, if you have read through this whole article, let me offer you my personal congratulations! Next month we shall be able to give you more details on the 1968 annual meeting. Don't forget that you have a date with me April 29-30 at Hotel Kirkwood in Des Moines. Come prepared for a stimulating two days!

ELAINE OLSEN (MRS. MAX E.)
President

Deaths

Mrs. Edward Kohrs, 2534 E. Lombard Street, Davenport, a registered nurse, died on Thursday, December 28, 1967. She was the wife of Dr. Kohrs, a general practitioner. Mrs. Kohrs was an active member of the Scott County Auxiliary.

Homebound Handcraft Project



Mesdames Fred Lohr, George Spellman, Ahmand Akbari, Edward Hagen, Philip Pugh and George Skorey (from left to right) are shown checking and marking the unusual and attractive items offered at the Sioux Med-Dames' Homebound Handcraft Sale. This picture appeared in the November 5 issue of the Sioux City Journal, as a part of the exceptionally fine advance publicity for the Sale.

The Homebound Handcraft Sale sponsored by the Sioux Med-Dames, the Auxiliary to the Woodbury Medical Society, in cooperation with Siouxland Rehabilitation Center, was held November 9, 10 and 11. Articles made by the homebound handicapped adults in Sioux City and throughout the rest of Iowa were offered for sale during regular store hours at the Younker-Davidson Store in Sioux City.

The Younker-Davidson Store cooperated further by paying for a sizable advertisement in the SIOUX CITY JOURNAL the day before the opening of the sale.

In addition to this advertisement, the newspaper carried a picture a week for three weeks, two of which included not only an Auxiliary volunteer, but a handicapped homebound worker and the particular sale items made by that person. Two TV programs and radio announcements were also a part of the publicity used.

Mrs. Martin Blackstone was general chairman. Mrs. Carl Jacobs and Mrs. Philip Pugh were in charge of publicity, and Mrs. Clark Hyden and Mrs. Ahmad Akbari, of staffing. Mrs. Arthur Horst was treasurer. Others on the general committee were Mesdames Edward Hagen, Charles Johnson, Leonard Boggs, George Spellman, Fred Lohr, Donald Wagner, and George Skorey.

Encouraged by the Siouxland Rehabilitation Center, the Sioux Med-Dames have sponsored successful sales during each of the past 18 years. The sale this year netted $1,100, an amount well above the proceeds of earlier sales. The entire sales price, in each instance, goes to the handicapped person who made the item sold.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

Legislative Projection 1967-68

1. Give the Precinct Action Course, for 1968 is election year. Encourage every member to exercise her right to vote, and otherwise to take an active part in the political party of her choice.

2. Use any women who have attended a "Day in the State Legislature," when personal contact is needed with the state legislators. By means of more trips to the capitol, get more women involved, so they know the people in public office who represent them.

3. Be prompt, accurate and knowledgeable when requests for action are made by your medical society or the AMA. Read "Legislative Roundup," AMA NEWS, daily periodicals and any state medical society legislative news publications.

4. Hold legislative programs at meetings, or give spot announcements. Have a legislator as speaker, after clearing his name with your medical society.

5. If you did not attend the state workshop last fall, write for any information you need to carry out your local plans.

MRS. D. L. MORIARITY
Legislative Chairman
310 South First Street
Council Bluffs, Iowa 51501

Around the Hawkeye State

Black Hawk County

Mrs. John Napier, of Cedar Falls, is the general chairman for the annual Medical Ball to be sponsored by the Black Hawk Medical Auxiliary, on February 3 at the Tavern on the Green. Mrs. Louis Winninger and Mrs. Thomas Bairnson have been named ticket chairmen. Other chairmen are: Mesdames M. R. Dieckmann, decorations; Robert Blue and Richard McKay, entertainment; and Donald Penly and James Collin, publicity.

Proceeds from the Ball will be given to the Black Hawk Development Center this year.

AMA-ERF Fund Raising Projects

Note Paper
Playing Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036
or
Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

Polk County

The Polk County Auxiliary held its January meeting in the Regency Room at Johnny and Kay's Restaurant, in Des Moines. The program "Disaster Preparedness and You" was interesting. Following that program, the group was entertained by the Scandinavian Dancers from Grandview College, in Des Moines.

Scott County

The Scott County Auxiliary entertained the Farm Bureau ladies at a luncheon during October, at the Outing Club in Davenport. Mrs. Max Olsen, of Minden, president of the State Auxiliary, and Mrs. Ray Baetke, of Long Grove, president of the Scott County Farm Bureau Wives, were among the guests.

A skit, "How NOT to Conduct a Business Meeting," was presented by the local Parliamentarian Club, and it was hilarious. Following the skit, Mrs. Tornquist, president of the Parliamentarian Club, discussed the erroneous procedures portrayed in the skit, and conducted a question-answer period.

Pierced Ears Need Special Care

Current fashion and attractive earrings have made pierced ears extremely popular, even among young girls. It is important that ears be pierced in a physician's office to avoid possible infection and/or scarring. Some people—for example girls with severe cases of acne and those with a metal allergy—should not have their ears pierced. The girl with a bad case of acne, especially if she has had cysts in her ears, should avoid ear piercing since her glandular hyperactivity may predispose her to infection, which in turn may produce serious scarring. Anyone with a metal allergy should avoid having her ears pierced, since she will react to any nickel alloy—including a nickle-gold alloy—with a scaling eczematous rash.

Once the ears have been pierced, these simple rules will aid in keeping them attractive and free from infection:

1. Wash your hands before touching your ears.
2. Cleanse ear lobes with alcohol on sterile cotton three times per day.
3. Whi'e cleansing the ears, rotate the trainer earring, and push the stud back and forth.
4. Keep the hair back from the ears. Avoid using hairspray or atomized perfume, and postpone bleaching or dyeing the hair for three weeks.
5. Most important, don't touch the ears or fool with the earrings except for cleansing.
7. Report any pain, redness, swelling or feeling of tightness to your physician immediately.

—"The Ins and Outs of Ear Piercing," in PATIENT CARE, October, 1967.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Immunizing Biologicals, Sera and Antibiotics*

The Iowa State Department of Health maintains selected immunizing biologicals and drugs for distribution to the physicians of the state. Distribution is designed to encourage the immunization of children, to control infectious diseases, to provide infrequently-used items which local pharmacies may not be able to stock and to provide antibiotics for the treatment of venereal disease. Another end of the distribution effort is to encourage reporting of cases of disease which otherwise might escape the Department's notice.

DISTRIBUTION

To Private Physicians

Most vaccines, without limitation as to quantity, are supplied without charge to private physicians for administration in their offices to persons below 19 years of age. Private physicians receiving these vaccines for office use are requested not to charge the patient for the vaccine, but they may charge a fee to cover costs incidental to administration.

For Established Clinics

Appropriate vaccines, without limit as to quantity, are available without charge to well-child conferences, school programs, Head Start programs and other clinics conducted on a *regular* schedule and which have been *approved* by the local county medical society or its committee on immunization. Vaccines for clinics are furnished on request of the person in charge of the clinic. When children are to be immunized in the offices of physicians of their own choice, the physicians should order the vaccine, since the multidose vials provided cannot be broken down by directors of programs for division among several physicians.

For Community and County-Wide Programs

Preschool Age: Appropriate vaccines without limit as to quantity are available without charge for children under six years of age. Vaccine provided for preschoolers in community programs must be administered at no charge. Thus there must be local funding for the purchase of supplies incidental to the conduct of the program.

School-Age and Adult: Vaccines for these age groups will be supplied on a cost-reimbursement basis. Vaccine for county-wide programs may be purchased through the Department or from a pharmaceutical supply house. Measles vaccine for school-age children is supplied free of charge.

SHIPMENT OF VACCINE

Except for gamma globulin, which is not damaged by unrefrigerated shipment, and for emergency shipments of rabies vaccine, *biologicals will not be dispatched from the State Department of Health between Thursday noon and Monday morning because of delays in transport.* No order will be accepted for less than 100 doses of oral polio vaccine. This product must be shipped packed in dry ice, and transportation charges are prohibitive on smaller orders. Large orders of biologicals to be used in school or area programs should be placed at least two weeks in advance, in order to permit procurement and proper handling.

IMMUNIZING AGENTS AVAILABLE— INFECTIOUS DISEASES

Diphtheria, Tetanus, Pertussis (DTP): Available in 7.5 cc. vials (15 doses) for children under six years of age.

Diphtheria-Tetanus Toxoids Combined (aluminum phosphate absorbed) for Adult Use: Available in 5 cc. vials (10 doses) for immunization of persons six years of age and older.

Diphtheria Antitoxin: For passive immunization of early clinical cases. Product is a horse serum.

Smallpox Vaccine (Dryvax, Dried Smallpox Vaccine): Available in 10- and 100-dose vials.

Gamma Globulin: Available in 2 cc. vials for indigent or medical-hardship patients who have been *closely* exposed to known cases of infectious hepatitis, measles or German measles. For patients able to pay, physicians will be billed on a cost-reimbursement basis.

Typhoid Vaccine: Available in 20 cc. vials for persons who have been in close contact with a known case of typhoid fever or a known typhoid carrier.

* Revised 1-1-68.

Not furnished for widespread use in "disaster conditions."

Duck-Embryo Anti-Rabies Vaccine

For prophylaxis following bites of rabid or suspected-rabid animals. It may be used for pre-exposure immunization of persons at high risk, e.g. veterinarians, animal handlers, dog catchers, etc.

Anti-Rabies Hyperimmune Serum

For use in passive immunization of persons bitten about the face and neck or with bites on other parts of the body within three days after being bitten. It does not replace anti-rabies vaccine, but serves as an adjunct in certain situations. The product is a serum of equine origin.

Snake Anti-Venin—Polyvalent anticrotalid:

This product is for treatment of bites of most American snakes. It is of equine origin. It may be obtained direct from the Department on an emergency basis. Enough of this material for one envenomization treatment is also kept at the following Poison Centers.

Iowa Methodist Hospital Des Moines	St. Joseph Mercy Hospital Mason City
Lutheran Hospital Fort Dodge	Dickinson County Memorial Hospital Spirit Lake

Poliomyelitis Vaccine (Trivalent): Available in one-dose, 10-dose and 100-dose vials.

Measles Vaccine, Live Attentuated (Edmonston Strain): Available in single doses.

Measles Immune Globulin (0.4 cc. for each dose of vaccine) will be furnished with vaccine orders of 25 doses or more. Measles immune globulin *must* be administered with this vaccine.

Measles Vaccine, Live, Further Attentuated (Schwarz Strain): Available in 50-dose vials. For community-wide programs with administration by jet injectors. It cannot be administered by other methods.

Vaccinia Immune Globulin (VIG):

The American National Red Cross supplies this material. Volunteer Red Cross consultants assist in the distribution. Any physician who feels that VIG might be required for one of his patients should telephone the nearest of the consultants whose names, addresses and telephone numbers appear below. If he agrees that the condition of the patient will benefit from treatment with VIG, the consultant will authorize its shipment from the nearest regional blood center. These regional blood centers have 24-hour coverage and are equipped to arrange immediate transportation to the attending physician by the most rapid means available. If necessary, the Department will assist as liaison in Des Moines for receipt and delivery.

Irving Schulman, M.D., Professor and Head, Department of Pediatrics, University of Illinois College of Medicine, 840 S. Wood Street, Chicago, Illinois 60612, Telephone No. (312) 663-6711
Residence—Glencoe, Illinois (312) 835-1774

Alternate:

Marvin Cornblath, M.D., Professor of Pediatrics, University of Illinois College of Medicine, 840 S. Wood Street, Chicago, Illinois 60612, Telephone No. (312) 663-6711
Residence—Glencoe, Illinois (312) 835-1774

ANTIBIOTICS FOR VENEREAL DISEASE CONTROL

The following drugs are available without cost to physicians for the treatment of reported cases of venereal disease. Requests for drugs should be made directly to the Division of Venereal Disease Control, and must be accompanied by case reports.

Procaine Penicillin, Aqueous:

Aqueous penicillin is the drug of choice in the treatment of gonorrhea—2,400,000 units for male and 4,800,000 units for female gonorrhea cases. From 4,800,000 units to 12,000,000 units should be used for syphilis cases, depending upon the diagnosis.

Benzathine Penicillin G:

Distribution restricted to syphilis cases—2,400,000 to 9,000,000 units depending upon diagnosis.

Tetracycline (250 mg. capsules):

Distribution is limited to medically-indigent syphilis cases in which pencillin sensitivity has been definitely established.

Iowa Camp for Diabetic Children

The Iowa Diabetes Association will sponsor a camp for diabetic boys and girls from the afternoon of Sunday, July 28, through the afternoon of Friday, August 2, 1968. Registration will be from 1:00 to 4:00 on Sunday, July 28.

It will be in Elm Camp, at the 4-H camp in Madrid (near Boone and Ames). Its total capacity is 80 people. There will be swimming, nature hikes, arts and crafts, a program of teaching about diabetes, and other activities. The teaching program will be conducted by dietitians, nurses and doctors. The diets will be overseen at each meal by dietitians.

The cost will be $50 per child for the five days, payable by June 1. Applications together with physical exams and diets are also due June 1.

To be eligible, a child must be a diabetic, aged 8 through 15, whose doctor feels he is well enough controlled to be able to attend.

Distribution of information and applications is being made through public-health and school nurses. For more information contact: Elm Camp, c/o Chronic Illness & Aging Service, Iowa State Department of Health, Robert Lucas Building, Des Moines 50319.

Are Cattle Being Tested for Tuberculosis?

Frequently persons working in the field of public health are asked questions about the present status of the program of testing cattle for tuberculosis. This discussion is intended to answer those questions.

The bovine tuberculosis program in Iowa was started in 1919, when a legislative appropriation was made for this purpose. A limited amount of tuberculin testing had been done previously. Since that time a cooperative program, sponsored by the Iowa Department of Agriculture and the U. S. Department of Agriculture, for the eradication of bovine tuberculosis has been under way. The beginning was gradual, but the tempo increased so that by 1927 an intensive program was in progress. In Iowa, veterinarians have tuberculin tested more than 33 million cattle during this period. Of these, over 350,000 have been classed as positive reactors and sent to slaughter. Testing was carried out on an area basis. Entire counties were tested and retested at regular intervals and infected herds were retested until they were entirely negative on repeated tests.

As the infection rate in each county was reduced to less than one-half of 1 per cent, the county was designated by the U. S. Departent of Agriculture as a "Modified Accredited Tuberculosis-free Area." On December 1, 1935 the last county in Iowa reached this milestone and the entire state was "accredited." Historically, it is of interest to note that Iowa was the 32nd state to be accredited. The first state was accredited in 1928 and the last state in 1940.

In order for the state to maintain the status, retesting must be done repeatedly. The present program consists of testing one-sixth of the townships in each county each year. Thus a test of each county is completed every six years.

In addition to this periodic testing for re-accreditation, tuberculosis retesting is accomplished under other circumstances: (1) in certain milk sheds, all cattle in herds producing Grade A milk are required to be retested at shorter intervals; (2) certain owners of purebred herds have a retest done annually to maintain an "accredited herd" status; (3) selected animals are tested to meet requirements for fairs and cattle shows, or for shipment to other states or foreign countries; (4) all known infected herds are retested until entirely negative on repeated tests; (5) epidemiological investigations are made whenever tuberculosis is found on veterinary post-mortem inspection during routine packing house slaughter. The diseased animal is traced back to point of origin and all contacts of the infected animal are tested. The procedure of testing contacts is very productive for the amount of testing involved. It locates foci of infection early. Eradication of these centers of infection helps to prevent spread of the disease to clean herds as a result of routine cattle traffic.

In the early stages of the program in Iowa, 110 of every 1,000 cattle tested were positive reactors. Last year 239,765 Iowa cattle were tested and there were fewer than 2 positive reactors per thousand tested. Because of this decrease there has been marked reduction in the amount of human tuberculosis caused by the bovine strain of the organism. Human cases of this type now rarely occur. Nevertheless, the job of eradication of bovine tuberculosis has not been completed. Retesting must be continued in order to locate the remaining infected animals and to prevent the disease from again becoming a serious menace. This is no time for complacency.

Air Pollution Control Program Established for Iowa

The Iowa Air Pollution Control Law enacted in 1967 by the 62nd General Assembly establishes an air pollution control program within the State Department of Health. This law is enabling legislation, with provision for adoption of rules and regulations to cover technical details. The intent of this law is to provide a means for maintaining and improving the quality of the air resources of the state.

The law creates a nine-member Air Pollution Control Commission consisting of the Commissioner of Public Health and eight persons appointed by the Governor. A Department staff member serves as technical secretary. The Commission is allocated the policy making, rule and standard setting, and enforcement functions; and the Department staff is assigned the administrative, technical and investigative functions.

The Commission is authorized to provide general supervision over all laws in the state relating to air pollution, develop a comprehensive air pollution control program, adopt regulations for the control of air pollution, establish air quality standards, establish emission standards, require reports from polluters, encourage local air pollution control programs, and conduct appropriate enforcement activities.

The Department staff is authorized to administer the control program including regulations and standards established, conduct investigations of alleged air pollution, issue the required permits for new equipment capable of producing air pollution and for related control equipment, conduct studies for evaluating the extent and scope of air pollution, conduct studies and investigations related to air pollution, and accept and administer grants.

The law provides for the issuing of variances for existing equipment that may serve as a source of air pollution, and for extensions of individual variances contingent upon evidence of acceptable progress in reaching a state of compliance with applicable standards.

Provision also is made for cities, towns, or counties to develop local air pollution control programs within their jurisdictions, or jointly with other political subdivisions in this or other states. These subdivisions are authorized to assume jurisdiction over air pollution control when the local control program has been accepted by the Commission upon evaluation.

Administrative procedures relating to violations of regulations or standards are specified, along with due process of law for alleged violators.

The Iowa Air Pollution Control Commission consists of Arthur P. Long, M.D., Dr.P.H., Commissioner of Public Health, ex-officio member; C. H. Savery, Davenport, professional engineer member; Arthur W. Shafer, M.D., Davenport, industrial physician member; R. G. Anderson, Des Moines, industrial management member; Louis P. Culver, Dunlap, agriculture and conservation member; Amelio J. Gioffredi, Ankeny, labor member; Elmer P. True, West Des Moines, political subdivision member; and W. J. Hausler, Jr., Ph.D., Iowa City, and Carl D. Smith, Cedar Rapids, members at large. C. L. Campbell, Ph.D., State Department of Health, Des Moines, serves as technical secretary.

Workshop on Home Care-Homemaker Services

The Iowa State Department of Health, as a cooperating agency of The Iowa Council for Homemaker Services, announces the Council's sponsorship of a Training Short Course for directors and supervisors of homemaker services, to be held at Iowa State University, Ames, Tuesday, Wednesday and Thursday, February 20, 21 and 22, 1968. Mrs. Betty H. Andersen, executive director of the National Council for Homemaker Services, Inc., who has a special interest in the developing services in Iowa, will be a special guest and keynote speaker at the Short Course.

The Course is open to all currently active directors and people who may anticipate accepting such positions in their communities. Iowa physicians are recognizing the important implications of the home-care services which these programs provide for their individual patients. The Council is aware of the important role which the directors of these programs play in the delivery of home-care services. Staff members of the Health Department will participate as instructors of the Course.

Morbidity Report for Month of December, 1967

Diseases	1967 Dec.	1967 Nov.	1966 Dec.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	662	518	688	Entire state
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	52	11	105	Linn, Scott, Woodbury
Whooping cough	11	8	9	Cerro Gordo, Lyon, Polk, Scott
Brucellosis	6	3	6	For the state
Chickenpox	825	211	1123	For the state
Meningococcal meningitis	3	1	1	Louisa, Scott
Mumps	2122	575	178	For the state
Poliomyelitis	0	0	0	
Infectious hepatitis	44	19	34	Black Hawk, Mills, Wright
Rabies in animals	13	8	13	For the state
Malaria	6	0	2	For the state
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	17	6	24	For the state
Syphillis	62	63	90	For the state
Gonorrhea	351	364	297	For the state
Histoplasmosis	3	3	20	Hardin, Page, Polk
Food intoxication	0	0	257	
Meningitis (type unspec.)	1	3	1	Dubuque
Diphtheria carrier	0	0	0	
Aseptic meningitis	1	0	0	Polk
Salmonellosis	9	11	7	For the state
Tetanus	0	0	0	
Chancroid	0	0	1	
Encephalitis (type unspec.)	0	1	0	
H. influenzal meningitis	0	2	1	
Amebiasis	1	0	1	Dallas
Shigellosis	13	5	6	Black Hawk, Linn, Scott, Webster
Influenza	657*	0	0	For the state

* Eight serologically confirmed cases; 649 epidemiologically diagnosed cases.

Abrupt Outbreak of A-2 Influenza in Iowa

The State Hygienic Laboratory announced on December 28 that it had identified A-2 influenza virus in Iowa. Specimens were collected during outbreaks in Clarinda, in Page County, and at Story City, in Story County, during the first week in December and again in the third week of that month. The paired sera, acute and convalescent, yielded positive results both from complement-fixation and hemagglutination-inhibition testing. All attempts to isolate the virus in embryonated eggs and tissue cultures, the Laboratory said, had thus far been fruitless. However evidence at hand was sufficient to justify an unequivocal statement that A-2 influenza was present in the state.

High rates of absenteeism were first reported by schools in the southwestern part of the state, during the first week in December. By the third week that absenteeism had spread generally across the southern part of the state. Representative physicians in some of the northern counties, moreover, said that they were seeing more and more patients who complained of symptoms compatible with those seen in the previous outbreaks. The symptoms most commonly encountered included headaches, mild fever, sore throat, some chest pain and cough, lethargy and tiredness, and occasionally stomach upset.

There have been many reports of another syndrome characterized by nausea and vomiting, with diarrhea, of 24 to 36 hours' duration. Some physicians have seen a gastroenteric syndrome such as was described above, followed by several days of recovery and comparative well-being, and then the onset of upper-respiratory symptoms accompanied by a fever as high as 103° to 104°F.

Influenza characteristically does not cause gastroenteric complaints. Because of the wide appearance of the gastroenteric syndrome, the State Department of Health is inclined to believe that another agent may be at work, either with or preceding the actual onset of influenza symptoms. The State Hygienic Laboratory is ready to investigate this possibility as quickly as representatives can be obtained.

Influenza appeared in November in Michigan. By the third week in December it had been diagnosed serologically in nine states—Michigan, Illinois, New York, Georgia, New Jersey, Oklahoma, Alabama, Florida and Iowa. Additional states have noticed high absentee rates, but have not yet demonstrated influenza serologically. These include Maryland, Ohio, Mississippi, the District of Columbia and Kansas. The sudden appearance of the virus in the center of the country was unexpected. Because of the proximity of Iowa to the places where the virus first appeared in this country, there was insufficient time in which to alert physicians for any greater use of vaccines than had been recommended in July.

Chronic Respiratory Disease Treatment Center

An outpatient clinic to develop and evaluate services for emphysema and chronic bronchitis patients is being set up at the Tucson, Arizona, Medical Center under a contract awarded by the National Center for Chronic Disease Control, U. S. Public Health Service.

Sponsored by the Center's Chronic Respiratory Diseases Control Program, which will administer the $201,688 contract, the clinic will provide comprehensive care on a long-term outpatient basis for patients with symptoms of chronic lung disease.

Emphysema and chronic bronchitis have become urgent health problems throughout the country, and pose special problems for Arizona where the death rate from these diseases is generally 3 to 4 times as great as the national rate. In Arizona, chronic chest diseases rank as the fourth leading cause of death, while they rank tenth in the U. S. Emphysema is the second leading cause of Social Security compensated disability in the nation, but it ranks first in Arizona.

Population movement may be more responsible for this excess number of chronic respiratory disease deaths than environmental factors or special susceptibility. The percentage of deaths in Arizona attributed to chronic respiratory disease is significantly higher for patients born in other states than for native Arizonians, not because native Arizonians are less susceptible, but because such a preponderance of respiratory patients living in the state migrated there from other parts of the country, seeking relief from their breathing difficulties. The Arizona climate is popularly thought to be beneficial for respiratory disease patients.

The two-year clinical study at Tucson Medical Center will provide care for adult patients with pulmonary emphysema or chronic bronchitis. All referrals must originate from physicians, and each patient must be physically able and motivated to follow the program prescribed for him for at least one year. Patients will receive drug therapy, inhalation therapy, breathing exercises, postural drainage, physical conditioning and regular check-ups. Treatment is geared to the patient's needs, and both individual and group approaches will be used.

Please Mark Your Calendar

IMS ANNUAL MEETING

April 28-May 1

Hotels Savery and Fort Des Moines

Des Moines


in moderate hypertension and
poorly controlled mild hypertension
(when diuretics or sedatives are inadequate, for example)

When your patients expect a lot...

like relief from hypertensive symptoms
(headache, fatigue, nervousness, palpitation or insomnia, for example)

like an up-to-date, once-a-day dosage schedule
(a schedule not unlike timed-release medication, for example)

like a daily dose of medication for peanuts
(at 10¢ a tablet, for example)

like generally well-tolerated therapy
(as described in the package insert, for example)

...give them a little
(one tablet daily)

Regroton®

chlorthalidone 50 mg., reserpine 0.25 mg.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Regroton should be used in pregnant patients or in women of childbearing potential only when, in the judgment of a physician, its use is deemed essential to the welfare of the patients; adverse reactions (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn.
Precautions: Antihypertensive therapy with Regroton should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue Regroton therapy two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Regroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. (B) 46-600-B
For details, see complete Prescribing Information.

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Journal Book Shelf

(Continued from page 162)

people fall into the category of mild retardation—individuals who later in life frequently blend quite readily into the general population. Nevertheless, they are beset by many learning problems and a great deal of emotional turmoil.

Dividing the retarded into two groups, as is done in this pamphlet, is useful. Group A consists of individuals from low socio-economic families that frequently have been culturally deprived. Group B consists of the exact opposite. Such a division has implications for the evaluation and treatment of the mildly-retarded population.

This contribution is sufficiently significant so that the Clinic which this reviewer represents plans to distribute a copy of the pamphlet to each member of the local county medical society.—*Walter M. Block,* M.D., F.A.A.P., Medical Director, Linn County Child Evaluation Clinic

BOOKS RECEIVED

MODERN TREATMENT, Vol. 4, No. 4, ADVANCES IN THE TREATMENT OF POISONING, Guest Editor, *Jay M. Arena,* M.D., TREATMENT OF MENTAL RETARDATION, PART I, Guest Editor, *Charles M. Poser,* M.D. (New York, Harper & Row Publishers, 1967, $16.00 per year).

MODERN TREATMENT, Vol. 4, No. 5, TREATMENT OF MENINGITIS, Guest Editor, *William S. Fields,* M.D., TREATMENT OF MENTAL RETARDATION, PART II, Guest Editor, *Charles M. Poser,* M.D. (New York, Harper & Row Publishers, 1967, $16.00 per year).

NEUROPSYCHIATRY IN WORLD II, Volume I, ed. by *Col. Albert J. Glass,* MC, USA (Ret.) and *Lt. Col. Robert J. Bernucci,* MC, USA (Ret.) (Washington, D. C., U. S. Government Printing Office, 1967, $7.50).

INFECTIOUS MONONUCLEOSIS, by *Robert J. Hoagland,* M.D. (New York, Grune & Stratton, 1967, $7.50).

BURNS, SHOCK AND PLASMA VOLUME REGULATION, by *Carl A. Moyer,* M.D., and *Harvey R. Butcher, Jr.,* M.D. (St. Louis, C. V. Mosby Company, 1967, $18.50).

Clinical Electroencephalography

A continuation course in clinical electroencephalography will be held September 9-11, 1968, in San Francisco. The course is designed as a basic review of the applications of the EEG to clinical medical practice, and is sponsored by the American EEG Society (aided by a grant from the National Center for Chronic Disease Control, U. S. Public Health Service).

The faculty will include Drs. Reginald G. Bickford, Rochester, Minnesota; David D. Daly, Dallas; Robert J. Ellingson, Omaha; Eli S. Goldensohn, New York; Charles E. Henry, Cleveland; Peter Kellaway, Houston; John R. Knott, Iowa City; Michael G. Saunders, Winnipeg; Daniel Silverman, Philadelphia; and Richard D. Walter, Los Angeles.

Inquiries about details of the course or registration procedures should be addressed to Dr. Donald W. Klass, EEG Course Director, Mayo Clinic, Rochester, Minnesota 55901.



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Personals



Dr. George B. Theil, an associate professor of internal medicine at the U. of I. College of Medicine, is attempting to measure and to establish norms for the efficiency of human lungs in extracting carbon dioxide from the blood and expelling it from the body. His associates in the project are **Dr. George N. Bedell,** an associate professor of internal medicine and head of the Pulmonary Function Laboratory, **Dr. Bernard Clarke,** an assistant professor, and **Mr. Edward Burkhalter,** a sophomore medical student from Cedar Rapids, and the financial support for it is being supplied by the Iowa Thoracic Society. Eight normal people have been tested in an effort to establish a clearance baseline. Next, 12 patients in whom various lung diseases have been diagnosed will undergo the same test. "We are applying a technic previously utilized to measure kidney function," Dr. Theil explains.

Dr. James R. Mincks returned to his surgical practice in Bloomfield and **Dr. John Huston, Jr.,** came back to his radiologic practice in Cedar Rapids, in mid-December, after two-month tours of duty with *SS Hope* at Cartagena, Colombia.

Architects have been hired to plan what now looms as the most costly building project ever undertaken at the University of Iowa—a six-floor addition to University Hospitals that will cost somewhere between $12 million and $18 million. Tops on the cost scale to date is the projected Basic Science Building, which carries a $12 million price tag. As currently envisioned, the addition will be built south of the present Minimal Care Unit, on what is now a parking lot between the Hospitals and Iowa Fieldhouse.

Dr. Robert C. Hardin, vice-president for medical affairs, says the new building will be designed to consolidate all University Hospitals operating rooms, to consolidate outpatient clinic services and x-ray diagnostic units, and to provide 400 beds. However, the capacity of the Hospitals, now rated at 1,000 beds, will not be increased, since open wards in the original building will be closed. Subsequent plans call for remodeling the original building to convert open wards into rooms, in keeping with current hospital practice.

Dr. Hardin also says it is hoped that the new building can be constructed so that an eight-floor addition can eventually be built on top of the six floors. The addition will be financed under a new law empowering the Board of Regents to issue bonds pledging anticipated revenues of University Hospitals. Federal matching funds for hospital construction and for health-education programs will, of course, be utilized as well.

Dr. Donald F. Mirick resigned the post of Clinton County medical examiner, effective January 1, giving private practice and personal reasons as his explanation. He had a year left of his two-year term. **Dr. William R. Meyer** was named to replace him.

Rev. Mr. David Belgum, an associate professor of religion at the U. of I., is the editor of RELIGION AND MEDICINE, a book published in mid-December by Iowa State University Press, in Ames. Mr. Belgum also is the author of two of the 23 essays contained in the volume. The foreword was written by **Dr. William B. Bean,** head of the Department of Internal Medicine.

Dr. Donald B. Blume has succeeded **Dr. Charles Marriott** as president of the Woodbury County Medical Society. **Dr. Carroll Brown** is the new president-elect; **Dr. C. L. Beye** is vice-president; **Dr. C. T. Helseth** is secretary; **Dr. Paul Fee** is treasurer; and **Dr. W. C. Boden, Dr. Daniel Youngblade** and **Dr. W. C. Ziebell** have been named to one-year terms as trustees.

In its December 17 issue, the Council Bluffs NONPAREIL confidently predicted the election of **Dr. Walter R. Hathaway** as the town's next mayor. He has been a council member for two years, and the councilmen choose one of their number to serve as mayor. Dr. Hathaway, who has practiced pathology at Jennie Edmundson Hospital since

1963, took his M.D. at Marquette University in 1956, interned in Duluth, got his specialty training in South Bend, and practiced previously at a hospital in Neenah, Wisconsin.

Dr. Manly Michaelson has bought a building that previously was used as a clothing store, in Bellevue, and is having it remodelled to house his medical practice. He hopes to move his office there in the spring.

Dr. Laurence D. Gatzke was chosen as vice-president, for 1968, of the Muscatine Chamber of Commerce, in an election held on December 15.

The new officers of the medical staff of St. Joseph Mercy Hospital, Fort Dodge, are **Dr. Charles Dagle**, president; **Dr. Maurice Kraushaar**, vice-president; and **Dr. Charles Baker**, board member at large.

In Denison, a two-story office building is being built for **Drs. D. N. Crabb** and **James L. Flood.** The structure will contain two offices for dentists, in addition to those for the physicians.

At LeMars, the Floyd Valley Hospital's medical staff held its annual election on Tuesday, December 12. **Dr. Donald Faber** was elected chief, succeeding **Dr. H. L. VanderStoep; Dr. L. C. O'Toole** was chosen to serve as vice-president; and **Dr. Sherman Lindell** was reelected secretary.

The Muscatine County Medical Society transmitted a resolution to the Muscatine School District's board of directors, on December 11, favoring abandonment of wrestling there. The letter that contained it, signed by **Dr. K. E. Wilcox,** secretary of the County Society, cited two reasons: "(1) The practice of weight loss by adolescent males to qualify for a certain division of wrestling. This practice is very harmful to the nutrition of growing unstable boys. (2) The number of injuries that have occurred and continue to occur. These injuries are often permanent."

Mr. Bob McNiel, the wrestling coach at Muscatine High School, disclaimed responsibility for any weight-loss programs that the boys under his supervision may have engaged in, and contended "National statistics indicate a lower percentage of injuries from wrestling than from football, basketball or swimming." This year, for the first time, both junior high schools in Muscatine have wrestling mats and coaches.

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Dr. J. W. Martin closed his medical practice at Holstein on December 30. He mentioned no other plans than an intention to take a complete rest.

In a mid-December letter to the Waterloo School Board, **Dr. Clark N. Cooper,** a Waterloo surgeon, requested that his group, Surgical and Orthopedic Associates, be excused from participation in the program of physical examinations for prospective participants in high school athletics, beginning with the 1968 fall school term. He said that he believes there is general agreement among Waterloo physicians that the examinations could best be given by the youngsters' respective family doctors. When questioned by a reporter for the Waterloo COURIER, Dr. Cooper estimated that between 700 and 800 athletes in the junior and senior high schools there are examined free of charge each year.

The superintendent of schools, **Dr. George Hohl,** predicted that the switch would cause a problem because parents cannot be relied upon to arrange for such examinations for their children.

In his letter, Dr. Cooper had said, "For many years, actually since 1934, we have examined athletes both in high school and junior high mostly because it was sort of an enjoyable project, and originally it provided us definite personal contacts that served in the development of one's practice. In recent years, of course, this has changed, particularly with the advent of quite uniform insurance protection." He pointed out that the IMS Committee on Sports Medicine advocates that examinations be carried out by each athlete's family doctor.

Dr. and Mrs. M. L. Scheffel, of Malvern, have provided a whirlpool bath to the Nishna Cottage Nursing Home there.

A reporter for the Burlington HAWKEYE-GAZETTE sought out **Dr. William R. Vaughan,** of New London, a member of the IMS Committee on Sports Medicine, and **Dr. Frank G. Ober,** a Burlington orthopedist for their opinions on high school wrestling and the resolution on that subject recently adopted by the Muscatine County Medical Society. Dr. Vaughan was quoted as saying that the IMS Committee "is trying to encourage wrestling . . . and to help schools that are starting wrestling." He went on to say he supposed the Muscatine Society's action might have been occasioned by the fact that a high school wrestler was fatally injured in a match there last year. Dr. Ober, a former school-board chairman, was quoted as saying, "Properly coached wrestling is good. I emphasize 'properly coached.'" He also told the reporter that the Des Moines County Medical Society opposes trampoline exercises and junior high-school wrestling.

The same newspaper article (December 14 issue) reported an interview in which **Mr. L. F. Pease,** principal of Burlington High School was said to have contended that junior-high wrestling helps answer the problem of providing coaches with competent contestants in the lightest weight classes. Because boys normally advance to the heavier classifications as they gain skill and experience, from year to year, a start of training in the sport at the seventh, eighth or ninth grade level could be expected to provide the high-school coach with prospective winners, rather than mere neophytes, among physically-small tenth graders.

Dr. Wallace Ash, of DeWitt, was elected president of the Clinton County Medical Society at a meeting held on December 12. **Dr. Kermit Sorenson** and **Dr. G. T. Schmunk,** both of Clinton, were chosen as vice-president and secretary-treasurer, respectively.

Articles by two U. of I. internists have been included in a booklet entitled "Present Knowledge in Nutrition," published by the Nutrition Foundation, New York City, marking the twenty-fifth anniversary of its establishment. **Dr. William B. Bean's** article concerns pantothenic acid, a vitamin that has received little attention from researchers because it is present in nearly all diets, and deficiencies of it are very rare indeed. **Dr. Robert E. Hodges'** articles are on diabetes mellitus and on carbohydrates. In the latter of them, Dr. Hodges recommends including carbohydrates not only in normal diets but also in those designed for weight reduction.

Dr. Jack Morgan, chief of the medical staff at the Jefferson County Hospital, in Fairfield, participated in the ground-breaking ceremony, December 15, for a $1,550,000 addition to the institution. Completion is scheduled for the summer of 1969. Dr. Morgan's remarks were summarized in the statement, "This fulfills nine years of dreaming."

In mid-December **Dr. Gene Michel** turned the first spadeful of earth, symbolizing the start of construction of his new office building in Sac City.

Dr. James Hendricks, of Clear Lake, made some interesting comments on returning, in December, from 10 weeks with the AMA Volunteer Physicians for Vietnam program: "Contrary to what

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many here believe, there are not many women and children burned by napalm. Most of the burn cases are due to accidents in the home. . . . Hospitals are filthy, according to our standards. In the hospital where I served [a 425-bed institution 450 miles from Saigon], there was one water tap which was used for bathing, drinking and washing clothes. Electric power failed on numerous occasions. . . . The hospital closed completely from noon to 2:30 or 3:00 in the afternoon. Everything came to a complete halt. If someone was deathly ill, no one could do anything. And the hospital closed once again at 6 p.m. I was not allowed to return to the hospital after dark."

After completing his service in Vietnam, Dr. Hendricks went on around the world. Commenting on his stop-over in Berlin, he said, "A new wall is being built there, with a revolving tube or pipe on top of it. It will revolve so that anyone trying to get over it will slip back to the ground. I guess I saw what we are trying to prevent in Vietnam when I saw that wall!" He said that he has no plans to return to Vietnam, but he is glad that he went this time.

Dr. C. W. Clark, of Nashua, is the new president of the Chickasaw County Medical Society. The annual meeting of the group was held in New Hampton on December 12.

Dr. Walter A. Anneberg was elected president of the medical staff at St. Anthony Hospital, in Carroll, on December 19. **Dr. Leo Kuker,** who had been president, was named vice-president; **Dr. R. B. Morrison** was reelected secretary-treasurer; and **Dr. John R. Hornberger,** of Manning, was named delegate-at-large.

The new officers of the medical staff at Allen Memorial Hospital, Waterloo, are **Dr. George W. Heine,** president; **Dr. Howard Hartman,** president-elect; **Dr. Edward Sitz,** secretary; and **Dr. Andrew Smith,** staff executive committee member. The former president is **Dr. Lewis B. Harned.**

The Black Hawk County medical examiner, **Dr. Paul O'Keefe,** said in his report for 1967 that, as of December 18, seven of the 20 persons killed instantly in motor vehicle accidents or D.O.A. at hospitals in his county showed definite signs of intoxication. That number, he commented, was "quite a few less" than during the comparable period in 1966. There had been 15 suicides during the first 11½ months of 1967—seven by gunshot; six by carbon monoxide; one by an overdose of a drug; and one by leaping from a window. Dr. O'Keefe's department had performed 36 autopsies, 36 being 25.17 per cent of the cases investigated. Only one death was judged a homicide.

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The possibility that schizophrenia may be transmitted from parent to child has been strengthened by the findings of a U. of I. physician, **Dr. Leonard Heston.** It has long been suspected that schizophrenia "runs in families," but proof has been lacking. Dr. Heston studied 47 persons born to schizophrenic mothers but reared by adoptive or other foster parents having no schizophrenic histories. If the cause of the disease were environmental, only about one per cent of the study group should subsequently have shown symptoms, for that is the incidence in the general population. But 15 per cent of his group developed schizophrenia, and 35 per cent suffered from severe neurosis, sociopathic personality disturbances and/or alcoholism. These findings have been confirmed by two Danish studies.

Dr. Heston's 50 controls had also been reared by foster parents, but they had been born to mothers having no schizophrenic backgrounds. None of them exhibited any symptoms. He cited the efficacy of drug treatment as another indication that the root of the problem is biological rather than environmental.

Dr. Leo R. Ingle, a medical graduate of the University of Indiana who is interning at a hospital in Mobile, Alabama, has agreed to start general practice during March in Coon Rapids. The town constructed a doctors' office building on the recommendation and with the technical advice of the Sears-Roebuck Foundation, and the Foundation also helped in the search for a physician.

Dr. J. E. Whitmire, of Sumner, was optimistic about the progress of the war in Vietnam when he returned home from his two months with the AMA Volunteer Physicians project in that country. His hometown paper, the GAZETTE quoted him as saying: "There have been a number of definite military gains in recent months," and reported that he was convinced that the "high tide" of the North Vietnamese troops' ability to wage offensive warfare is now in the past. "We should all be extremely proud of our boys," he told the reporter. "Not only are they fighting well, but they are also proving to be excellent ambassadors of good will, and in general are extremely well liked by the South Vietnamese populace."

According to Dr. Whitmire, there is much bitterness among both Americans and South Vietnamese over the reluctance of stateside leaders to order the closing of the North Vietnamese ports. "Once the North Vietnamese supplies from Russia are exhausted and their troops can no longer fight, the war, for all practical purposes, will be over," he declared. Besides furnishing medical service at Nha Trang, in the narrow-waisted middle of the country, Dr. Whitmire had an opportunity, through the help of an Air Force friend, to fly over battle zones on two different occasions and to talk with more of the military people than he might otherwise have been able to do.

Dr. Don H. Penly, of Cedar Falls, has succeeded **Dr. Fred Loomis,** of Waterloo, as president of the Black Hawk Medical Society. **Dr. Fred Dick, Dr. Lewis Zager** and **Dr. Gerald Vandervelde,** all of Waterloo, are the president-elect, vice-president and secretary, respectively.

The new chief of staff at St. Francis Hospital, Waterloo, is **Dr. Jean S. LePoidevin.** She has succeeded **Dr. F. T. Thornton** in that post. **Dr. G. R. Clark** is the new vice-president, and **Dr. C. P. Addison** is secretary.

Dr. James Shreffler is the new president of the medical staff at Schoitz Memorial Hospital, Waterloo, succeeding **Dr. Bernard Sand. Dr. Jean S. LePoidevin** is the vice-president, and **Dr. Gerald Vandervelde** is the secretary. Schoitz staff officers are elected for two-year terms.

Dr. Harry D. Harper was nominated, late in December, for the Burlington HAWK-EYE's Man-of-the-Year Award. The letter nominating him said, "He has served this community as a physician for over 35 years. But more than that, he has been a friend to all who have needed him." Later, the newspaper took an unprecedented action. It gave three awards, one of which was to Dr. Harper.

The Wapello County Health Clinic, at Ottumwa, was closed permanently on December 29. It has been maintained on the third floor of the Courthouse each Tuesday and Friday, and **Dr. D. L. Rater** has been the clinic physician for a number of years. Started mainly for controlling venereal disease, recently it has provided examinations and treatment for persons with many other health needs, most of them referred there by the County Department of Social Welfare. Until Medicare began, the clinic averaged between 20 and 40 patients at each session. Recently, the number has dropped to approximately 10. Henceforth, the county will provide care through the Welfare Department office and private physicians.

Dr. M. J. Vruno has succeeded **Dr. Richard Emmons** as president of the medical staff at St. Joseph Mercy Hospital, Clinton. The other officers are **Dr. G. A. Chalian,** vice-president, and **Dr. F. B. Rogers,** secretary-treasurer.





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Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

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Dr. Robert M. Collison, of Oskaloosa, has been chosen to serve as a director of the Iowa Trust & Savings Bank there. He also was recently elected to the Board of Directors of the Oskaloosa Chamber of Commerce.

On behalf of the town of Rockford, which has had no doctor of medicine since **Dr. R. A. Knight** died, in April, 1966, **Dr. Clarkson L. Kelly,** of Charles City, and **Dr. L. S. Wentworth,** of Marble Rock, accompanied a member of the local doctor-procurement committee on a follow-up trip to Des Moines, on December 7, to talk with an intern who had expressed some interest in what Rockford has to offer. They assured him of their assistance and cooperation if he decides to locate near them.

Dr. Richard Sedlacek, of Cedar Rapids, is the only physician on a seven-member board of directors that was appointed late in December by the board of supervisors for the projected Linn County Health Center. The supervisors also approved a first-year budget of $150,000 for the organization. Legislation enabling counties to provide such facilities was enacted by the 1967 session of the General Assembly of Iowa. The next step will be for the newly-appointed board to hire an administrator to begin coordinating several existing county agencies, and to start plans for a building to house the Center. Initially, United Community Services, in Cedar Rapids secured a federal planning grant, hired *five* coordinators and *five* writers, and enlisted many volunteers to work on plans for the Center. The board of supervisors wisely broke up that arrangement, cancelled a projected referendum on a bond issue, and decided to wait for specific authorization from the legislature.

Dr. Richard Waste, of Manchester, is making a satisfactory recovery after undergoing open-heart surgery at University Hospitals, Iowa City, on December 8. A plastic valve was put into his aorta.

Dr. Stanley Moen has become the president of the medical staff at Mercy Hospital, Cedar Rapids. Other new officers of the organization are **Dr. Richard Bausch,** president-elect; **Dr. Charles Schwartz,** vice-president; and **Dr. Thomas Schueller,** secretary-treasurer.

At Marshalltown, **Dr. Edward L. Jacobs** was recently elected president of the medical staff at Evangelical Hospital, succeeding **Dr. Russell Watt.** The other officers are **Dr. D. H. Winter,** vice-president, and **Dr. John M. Graether,** secretary-treasurer.

An item in the Christmas Day issue of the Des Moines TRIBUNE about **Dr. Frank C. Coleman,** a pathologist who practiced for many years at Mercy Hospital, Des Moines, reported that as chairman of the medical-school committee of the Greater Tampa Chamber of Commerce, he has been active in getting legislative approval for the establishing of a medical school at the University of Southern Florida, in Tampa, and that he is at present a member of a medical advisory committee appointed by the governor of Florida that will help in setting up the school. The first class there will be enrolled in 1971. The Colemans' elder son, **Steve,** is a student at Grinnell College.

At its annual meeting in Iowa City on December 27, **Dr. Paul Seebohm** succeeded **Dr. Robert D. Whinery** as president of the Johnson County Medical Society; **Dr. C. E. Schrock** was named president-elect; **Dr. John C. MacQueen** was chosen as vice-president; and **Dr. George R. Zimmerman** was elected secretary-treasurer. **Dr. Naguib A. Samaan,** a U. of I. internist, spoke on blood hormone levels and their significance in health and disease.

Dr. Jose Angel, last summer, purchased the 100-acre Bluffs Experimental Fruit Farm north of Council Bluffs, when ISU had completed its planned 19-year series of experiments there. He has a couple of men operating it for him, while he practices medicine at Carson and Council Bluffs, and serves as the Pottawattamie County medical examiner. He told a staff writer for the Council Bluffs NONPARIEL that he plans to set out 1,600 new fruit trees, mostly apple, next summer, and that he has applied for a license to experiment with the distillation of apple juice, with the objective of devising a method for making apple brandy. He said he had already set out 200 new grape plants there, replacing vines damaged or killed by windborne weed sprays during the past two years.

On January 8, **Dr. Ian M. Smith,** a professor of internal medicine at the U. of I., addressed the Cedar Rapids Dental Society on the subject "Use and Misuse of Antibiotics."

Dr. Richard E. Peterson, head of nuclear medicine at the U. of I. College of Medicine, was the

guest speaker at the January 2 meeting of the Wapello County Medical Society, held at the Ottumwa Country Club.

Drs. E. M. Eneboe and **Tony Leger** moved to a new medical office building in their community, Hawarden, during the New Year's weekend.

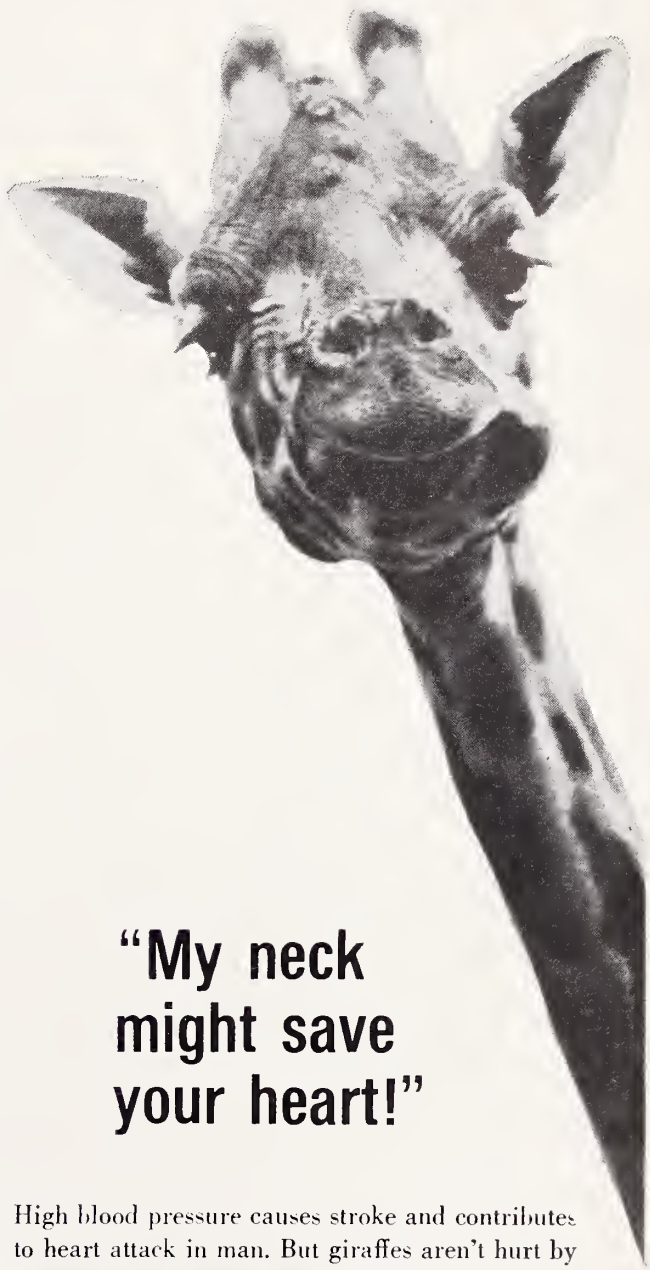
The new officers of the medical staff at St. Joseph Community Hospital, New Hampton, are **Dr. Curtis Rainy,** of Elma, president, **Dr. J. D. Caulfield,** of New Hampton, vice-president, and **Dr. James Carr,** of New Hampton, secretary.

At a meeting in Iowa City early in December, **Dr. Donald L. Warkentin**, a cardiologist and an assistant professor of internal medicine at the U. of I., gave a lecture in which he said that doctors are "too apologetic" when they find it necessary to tell cardiac patients to stop smoking. "We should be more aggressive when faced with this duty," he declared. "I think we are in the middle of a great American epidemic. It's time we really mounted a serious attack on this problem." For a person who has a high serum cholesterol and hypertension, he said, the risk of a heart attack is "tremendously increased."

Mr. Allan Honer, an injury-control representative of the U.S.P.H.S., has joined the staff of the Accident Prevention Section of the U. of I. Institute of Agricultural Medicine. He holds a bachelor's degree in sociology from Minnesota. He is to give safety demonstrations in schools, hospitals, industrial plants, meetings of youth groups and in other places where his services are requested. He has worked with the Communicable Disease Centers in St. Louis and Kansas City.

Dr. Clarke W. Mangun, Jr., a 1943 graduate of the U. of I. College of Medicine, has been named assistant director of the AMA's Department of Hospitals and Medical Facilities. That part of the organization studies costs and utilization of such institutions and services, and promotes improvements in nursing care and emergency medical services. He took a master's degree in public health at Columbia University in 1947 and worked for the USPHS for 20 years, most recently as its regional health director for Wisconsin, Illinois, Indiana, Ohio and Michigan.

The new officers of the Clay County Medical Society are **Dr. Everett D. Christensen,** Spencer, president; **Dr. Lawrence D. Colbert,** Royal, vice-



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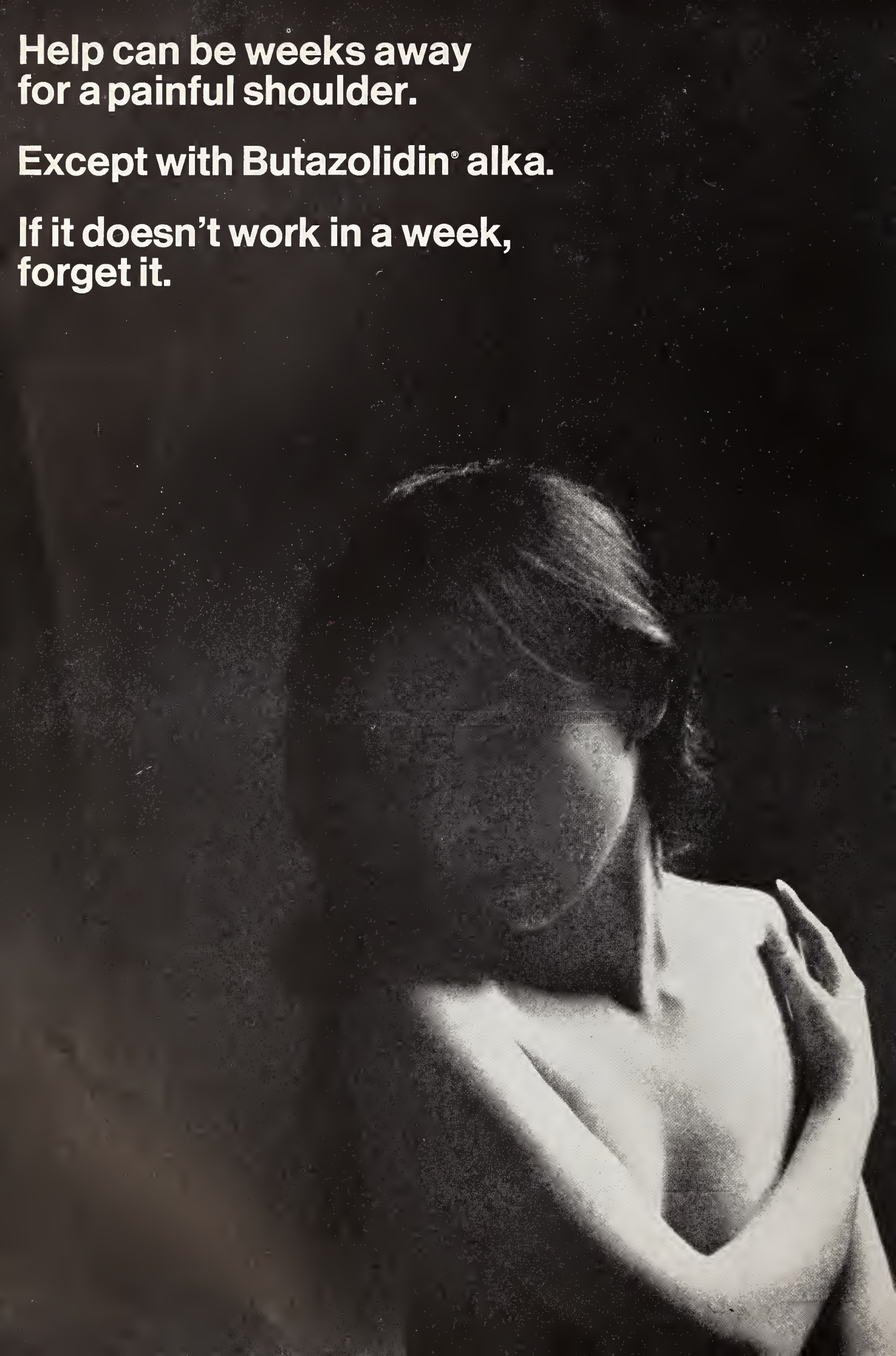
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ntraindications: Edema; danger of cardiac ompensation; history or symptoms of pep- ulcer; renal, hepatic or cardiac damage; ory of drug allergy; history of blood dys- sia. The drug should not be given when the ient is senile or when other potent drugs are en concurrently. Large doses of Butazolidin a are contraindicated in glaucoma.

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cautions: Before prescribing, carefully ect patients, avoiding those responsive to tine measures as well as contraindicated ients. Obtain a detailed history and a com- te physical and laboratory examination, in- ding a blood count. The patient should not ceed recommended dosage, should be sely supervised and should be warned to continue the drug and report immediately if er, sore throat, or mouth lesions (symptoms lood dyscrasia); sudden weight gain (water ention); skin reactions; black or tarry stools other evidence of intestinal hemorrhage cur. Make regular blood counts. Discontinue drug immediately and institute counter- asures if the white count changes signifi- ntly, granulocytes decrease, or immature ms appear. Use greater care in the elderly d in hypertensives.

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president; **Dr. Eunice M. Christensen,** Spencer, secretary-treasurer; **Dr. Kenneth M. Johannsen,** Spencer, delegate; and **Dr. Frank D. Edington,** Spencer, alternate delegate.

The Wright County Medical Society has elected the following officers for 1968: president, **Dr. Donald J. Abrams,** Goldfield; vice-president, **Dr. A. F. Benetti,** Belmond; secretary-treasurer, **Dr. C. P. Hawkins,** Clarion; delegate, **Dr. Dale A. Harding,** Eagle Grove; and alternate delegate, **Dr. George E. Schnug,** Dows.

Dr. David A. Watkins has joined **Dr. Ralph A. Dorner** in the practice of general and thoracic surgery in Des Moines.

The Pocahontas County Medical Society has elected **Dr. John M. Rhodes,** of Pocahontas, as its president; **Dr. James Gannon,** of Laurens, as its vice-president; **Dr. John B. Thielen,** of Fonda, as its secretary-treasurer. Dr. Thielen is its delegate, and **Dr. Harry L. Pitluck,** of Laurens, its alternate delegate.

The 1968 president of the Dallas-Guthrie County Medical Society is **Dr. Norman L. Krueger,** of Casey. The vice-president is **Dr. Perry L. Weigle,** of Van Meter; the secretary-treasurer **Dr. R. J. Peterson,** of Panora; the delegates **Dr. Wm. A. Castles,** of Dallas Center and Dr. Peterson; and the alternates are **Dr. E. E. Lister,** of Dallas Center, and **Dr. Wm. A. Seidler,** of Jamaica.

Dr. Ronald Paul Schmutzer is practicing with **Dr. Louis Goldberg,** at 4001 Ingersoll Avenue, Des Moines, on a part time basis. A 1966 graduate of the Stritch School of Medicine, at Loyola University, Chicago, he interned at Conemaugh Valley Memorial Hospital, Johnstown, Pennsylvania, and is currently a captain in the Army Medical Corps assigned to the induction center at Ft. Des Moines.

Dr. Arthur H. Downing, a Des Moines opthalmologist who is chairman of the IMS Committee on Safe Transportation, attended a National Conference on Community and Emergency Medical Services, in San Francisco, January 18-20.

Dr. Alonzo Jenks, a Des Moines internist, has taken a part-time assignment as medical director of the Des Moines office of the State Department of Public Instruction's Division of Vocational Rehabilitation.

On January 11, **Dr. Julius Conner**, head of the Des Moines-Polk County Health Department, talked to the eighth graders at Franklin Junior High School, Des Moines, on careers in medicine.

Dr. Laverne A. Wintermeyer, at one time a Des Moines GP, has completed a residency in pediatrics at Blank Memorial Hospital for Children, there. He is to remain at Blank Hospital, doing some teaching and seeing patients on a consulting basis.

Dr. J. F. Lawlor, formerly director of medical education at Broadlawns-Polk County Hospital, Des Moines, is now a permanent staff member of *SS Hope*. His duties, however, are administrative rather than concerned directly with patient care. The ship is in South American waters, but he is back in the states briefly and he will be leaving soon for Ceylon, where he will act as advanceman. *SS Hope* will tie up at Colombo from early April, 1968, until February, 1969.

Dr. John Fatland, a Des Moines urologist, addressed the Des Moines Life, Health & Accident Claim Association, January 9, on problems in his field of medicine.

Dr. Ralph Dorner, a Des Moines general and thoracic surgeon, discussed smoking and health on the KRNT-TV program, Don Soliday's People's Press Conference, December 13.

The AMA Board of Trustees has appointed or reappointed the following Iowa physicians to its councils or committees. The terms are all single-year. **Lauren A. Woods, M.D.**, head of pharmacology at the U. of I. College of Medicine, was reappointed to the Council on Drugs. **Donovan F. Ward, M.D.**, a Dubuque surgeon and a recent past-president of the AMA, was reappointed to the Council on Legislative Activities. **Robert G. Carney, M.D.**, head of dermatology, was reappointed to the Committee on Cutaneous Health and Cosmetics. **William D. Paul, M.D.**, professor of physical medicine and rehabilitation at the U. of I. College of Medicine, was reappointed to the Committee on the Medical Aspects of Sports. **Rubin H. Flocks, M.D.**, head of urology at the U. of I. College of Medicine, was reappointed to the Interspecialty Committee as the representative of the American Urological Association, Inc. **John G. Thomsen, M.D.**, a Des Moines dermatologist, was reappointed to the Committee on Quackery.



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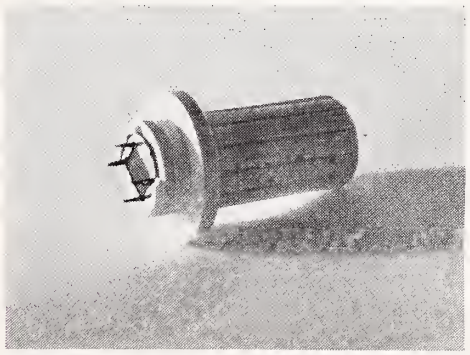
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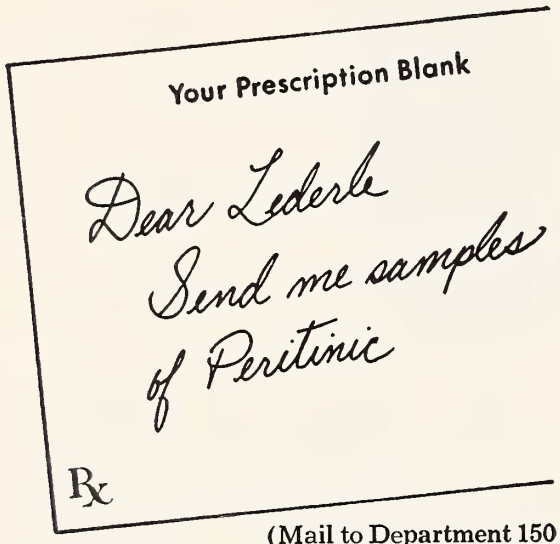
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Dr. Elmer M. Smith resigned his post as medical director for the State Board of Social Welfare, effective January 15, to serve an 18-month term as a medical adviser to the U. S. Agency for International Development, in South Vietnam. Dr. Smith, 57, spent two months at DaNang last fall for the AMA Volunteer Physicians for Vietnam program. He is one of the three IMS delegates to the AMA, and he currently is vice-president of the American Academy of General Practice. He was in private practice for three years, initially, at State Center, and after serving the military in World War II, he practiced for 18 years in Eagle Grove.

Dr. Walter N. Hanson succeeded **Dr. John Baker** as president of the Cerro Gordo County Medical Society on January 9. The other officers installed at that time were **Dr. Jerome F. Paulson,** vice-president; **Dr. Warren V. Wulfekuhler,** secretary, and **Dr. Harold L. Brenton,** treasurer. All of them practice in Mason City.

At the January 9 meeting of the Fayette County Medical Society, held at the Maple Lounge, in Fayette, **Dr. Rolf Kruse**, a Waterloo urologist, discussed trauma to the genitourinary system. The following were elected officers of the organization for 1968: **R. S. Jaggard, M.D.,** Oelwein, president; **W. J. Wolf, M.D.,** West Union, vice-president; **D. B. Jack, M.D.,** Oelwein, secretary-treasurer; and Dr. Jaggard, delegate.

Dr. Faye C. Lewis, of Webster City, recently published a book entitled PATIENTS, DOCTORS AND FAMILIES. The trade publication PUBLISHERS' WEEKLY calls it "a warm, reassuring and very sane book; . . . much of this memoir of a country doctor is very funny, and all of it is lighted with common sense." In 1940, she published her first book, DOC'S WIFE. She is, of course, an M.D., and she is also the wife of another M.D., **Dr. W. B. Lewis.** Many years ago, it is worth mentioning, she served a year's internship in Halstead, Kansas, under **Dr. Arthur E. Hertzler,** who has become famous as "the horse-and-buggy doctor," because of the book which he gave that title.

Dr. Puangtong Jutabha (pronounced "Chu-tō-pa") is the lady member of a man and wife physician team. She began general practice in Sigourney with **Dr. R. Giles Gillett,** on January 15. Her husband, **Dr. Opas Judabha,** is a staff physician at the VA Hospital in Iowa City. They hold medical degrees from a Thai medical school; they were in Chicago from 1958 to 1960, and at the Ohio State University College of Medicine from 1960 to 1962. Later, they spent some time teaching medicine in their homeland. They and their three children will live in Sigourney.

Dr. H. O. Stoutland is one of the members of the city council at Ackley.

The Mental Health Institute at Independence presented a symposium, January 11, on "Psychiatry and the Law." The participants included **Judge Peter Van Metre,** Waterloo; **Judge John W. Tobin,** Vinton; **Attorney Roger F. Peterson,** Waterloo; **John Dickinson, M.D.,** assistant superintendent, Men's Reformatory, Anamosa; **Mr. Harold Cerveny,** a Linn County adult parole officer; **Harry Oestreicher, M.D.,** clinical director of the Independence MHI; and **Helen Barton, M.D.,** chief psychiatrist, Reynolds Unit, Independence MHI. The audience consisted of psychiatrists, judges, lawyers, probation officers and social workers from a 20-county area.

Dr. William H. Myerly, the surgeon who pioneered open-heart operations in Des Moines 12 years ago, was sought out by reporters and asked to comment on human heart transplants. He was quoted as saying: "It seems that the surgeons in Cape Town, Palo Alto and Brooklyn are using humans in place of animals." His misgivings were said to be based on the paucity of experience with the rejection phenomenon.

Dr. F. Eberle Thornton, an orthopedic surgeon, is the new president of the medical staff of Iowa Methodist Hospital, Des Moines. **Dr. John W. Green,** the head of pathology at the Hospital, is president-elect, and **Dr. Dennis H. Kelly, Jr.,** an internist, is secretary-treasurer.

At the January 10 meeting of the Black Hawk Association of Medical Assistants, **Dr. Martin Ericsson** showed slides of his medical-mission work in the Congo.

Dr. F. O. Kershner has declined candidacy for reelection to the board of directors of the Clinton National Bank. He retired from medical practice in 1944 after serving the community for 37 years, and since then has devoted himself to banking and agriculture. He has been vice-president of the bank for many years, and has been a director since 1924.

Dr. Thomas C. White, of Denison, has been elected to active membership in the American Academy of General Practice.

Dr. T. J. Carroll, of Sibley, was inaugurated as lieutenant governor of Division 10, Nebraska District of Kiwanis International, at Sibley on January 15.



One by one
the family's downed
Because the
G.I. bug's around

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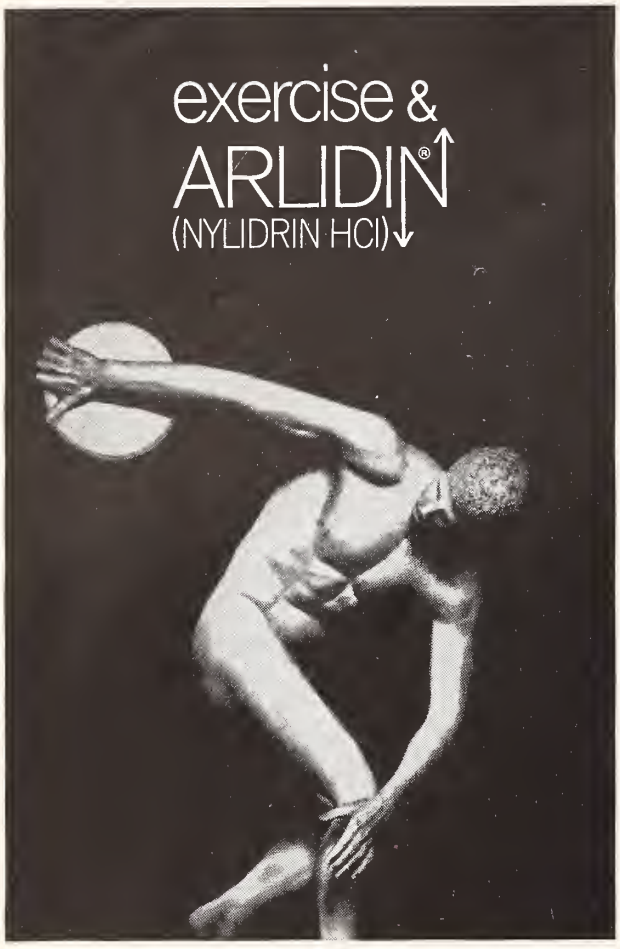
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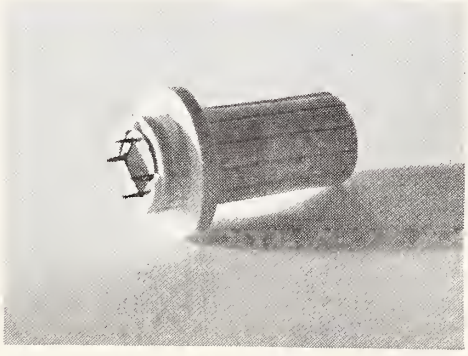
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Dr. A. E. Mayner, of Winthrop, was named Buchanan County medical examiner, on December 18, succeeding **Dr. Nelson Hersey,** of Independence, who had resigned effective January 1.

The January 4 issue of BUREAU, the newspaper at Walnut, Iowa, contained a tribute to **Dr. Frank N. Weber** for his 40 years of service to the community.

The officers of the Crawford County Medical Society and of the medical staff at the Crawford County Hospital are **Dr. R. M. Johnson,** Denison, president; **Dr. R. A. Huber,** Charter Oak, vice-president; and **Dr. J. M. Hennessey,** Manilla, secretary-treasurer.

Faculty members from the U. of I. Department of Pediatrics participated in the In-Service Training Program for the Iowa State Services for Crippled Children January 3-5. The meeting was held in the University Hospital School. The speakers and their topics were: "Progress Report: Iowa Infants Study," **George Baker, M.D.;** "Heart Disease in School-Age Children," **Robert Durnin, M.D.;** "Cerebral Palsy," **Alfred Healy, M.D.;** "The Infant Mortality Problem" and "Management of Functional Enuresis," **Sidney Kripke, M.D.;** "Progress in Regional Health Planning," **John MacQueen, M.D.;** "Tests of Intellectual Measurement," **Vinton Rowley, Ph.D.;** "Drug Therapy in Childhood Behavior," **Gerald Solomons, M.D.;** and "Tests of Intellectual Measurement," **James Stehbens, Ph.D.**

Dr. Donald J. Abrams, who recently began medical practice in Goldfield, is a 1964 graduate of the U. of I. College of Medicine. He interned at the Orange County General Hospital, in Orange, California. His military service, extending from August, 1965, to August, 1967, consisted of 13 months in Korea, 10 months in Oakland, California, and, as he told us, "1 month leave!!"

Society's attitudes toward suicide and the theoretical and experimental bases of behavior therapy were two of the topics discussed at a meeting of the Iowa Psychiatric Society, on Friday and Saturday, January 12 and 13, at the U. of I. College of Medicine. In addition to speakers from the Department of Psychiatry, the program participants included **Dr. Selig M. Korson,** of Independence; **Dr. Willard C. Brinegar,** of Cherokee; and **Dr. Sidney L. Sands,** of Des Moines. The guest speaker, **Dr. Myron Sandifer,** a professor of psychiatry at the University of Kentucky, discussed "Overview of Diagnosis."

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IN THIS ISSUE:

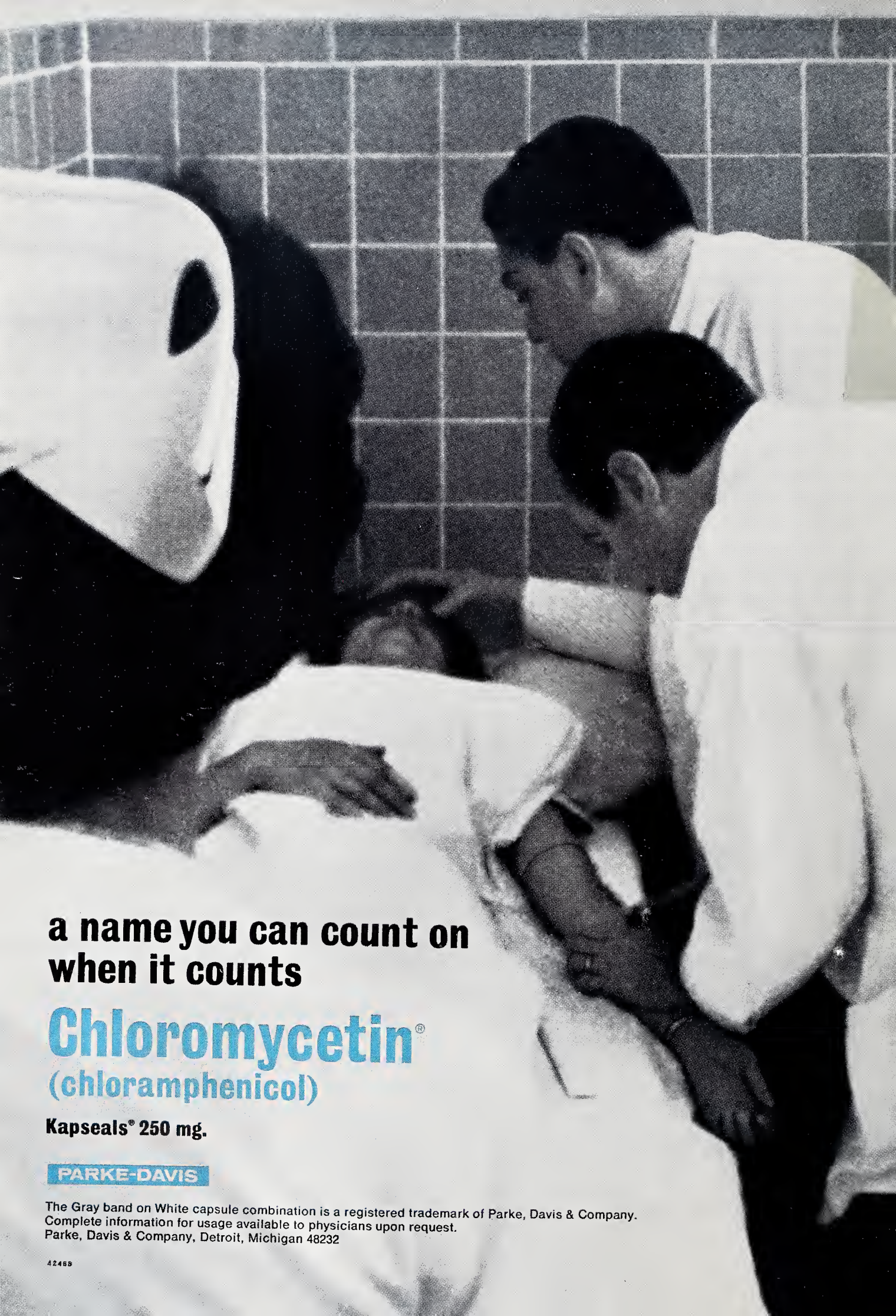
- Program, 1968 Annual Meeting, Iowa Medical Society
- Recent Advances in the Treatment of Dupuytren's Disease—Julian M. Bruner, M.D., Des Moines
- The Muscular Dystrophies in Iowa—James W. Hanson and Hans Zellweger, M.D., Iowa City
- Osteodysplasia With Mental Deficiency—Howard V. Turner, M.D., and Dennis H. Kelly, Jr., M.D., Des Moines
- An Evaluation of Gastric Resections for Duodenal Ulcer—W. H. DeKraay, M.D., G. C. Blome, M.D., K. E. Lister, M.D., and H. L. Wormhoudt, M.D., Ottumwa
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 475—Cancer of the Cervix, Radiation and Chemotherapy, Shock

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Vol. LVIII March, 1968 No. 3

CONTENTS

Annual Meeting, Iowa Medical Society, April 28-May 1, 1968 233

SCIENTIFIC ARTICLES

Recent Advances in the Treatment of Dupuytren's Disease
Julian M. Bruner, M.D., Des Moines 245

The Muscular Dystrophies in Iowa
James W. Hanson and Hans Zellweger, M.D., Iowa City 251

Osteodysplasia With Mental Deficiency
Howard V. Turner, M.D., and Dennis H. Kelly, Jr., M.D. 260

An Evaluation of Gastric Resections for Duodenal Ulcer
W. H. DeKraay, M.D., G. C. Blome, M.D., K. E. Lister, M.D., and H. L. Wormhoudt, M.D., Ottumwa 268

University of Iowa College of Medicine
Clinical Pathologic Conference No. 475 (Cancer of the Cervix, Radiation and Chemotherapy, Shock) 274

EDITORIALS

Geriatric Practice 285

The Bills That People Least Like to Pay . . . 285

Second-Grade Semantics 286

Peripheral Vascular Disease 287

In a Lighter Vein 291

How to Live Longer, or Drive to Live! 291

SPECIAL DEPARTMENTS

Coming Meetings 219

The Month in Washington 223

President's Page 284

Letters to the Editor 291

Journal Book Shelf 292

University Drug Letter 298

Doctor's Business 301

In the Public Interest facing page 302

Iowa Association of Medical Assistants 303

State Department of Health 304

Woman's Auxiliary 308

Personals 311

Deaths 330

MISCELLANEOUS

Comfortable Words 273

New Head of Radiology at University of Iowa . 293

Summer Camp for Diabetic Children 306

Federal Money for State Medical Library . . . 307

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COMING MEETINGS

IN STATE

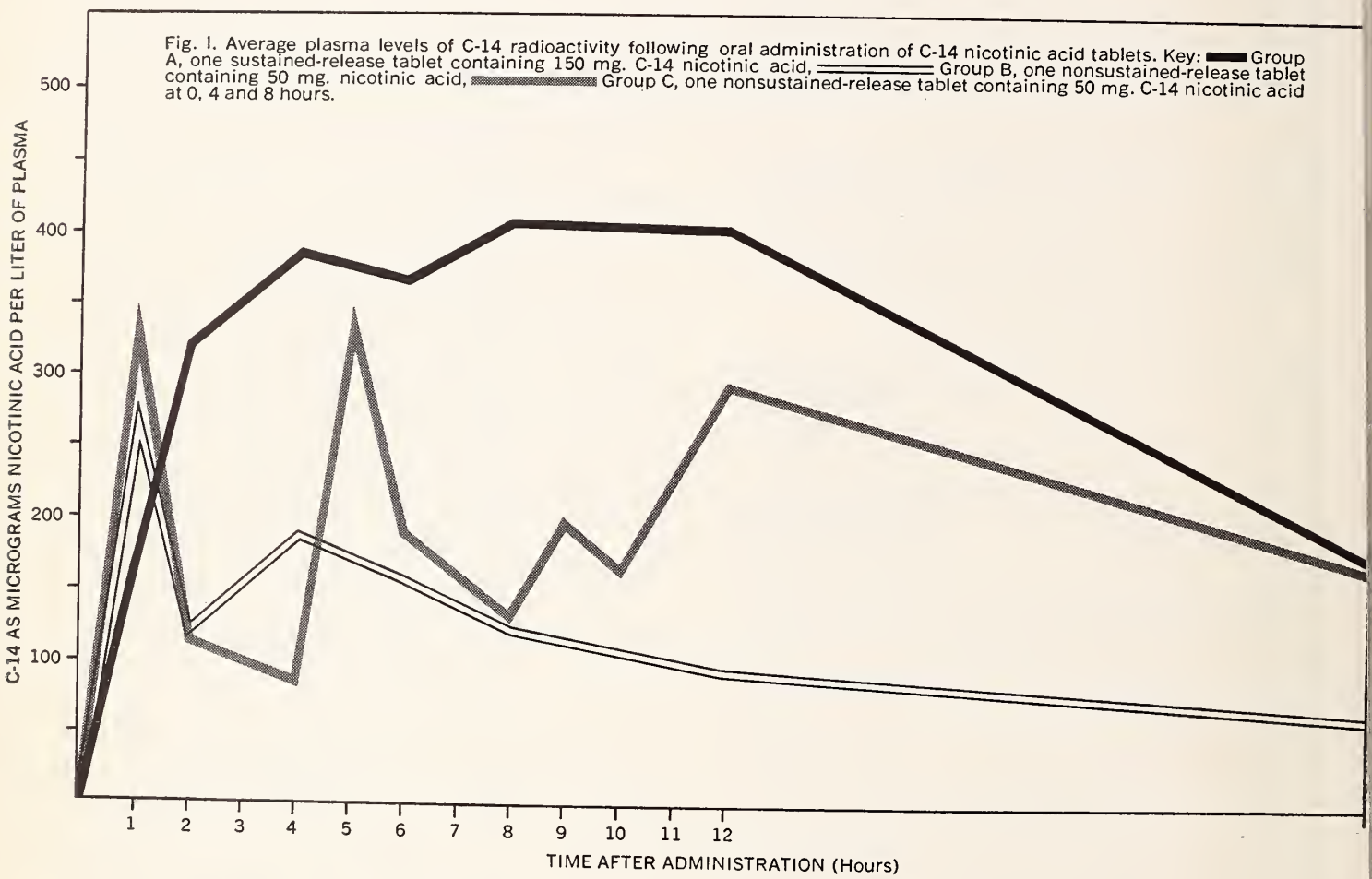
Mar. 14	**Sioux Valley Medical Association,** Sheraton Warrior Motor Inn, Sioux City.
Mar. 14-16	**Seminar for Doctors and Nurses on Coronary Care,** Sheraton Warrior Hotel, Sioux City.
Apr. 5-6	**Postgraduate Course on Trauma to the Head and Neck,** University of Iowa College of Medicine, Iowa City.
Apr. 6	**Seventh Annual Orthopedic and Rehabilitation Seminar,** Younker Rehabilitation Center, Iowa Methodist Hospital, Des Moines.
Apr. 18-19	**Twelfth Annual Pediatric Conference of the Raymond Blank Hospital Association,** Iowa Methodist School of Nursing, Des Moines.
Apr. 19-20	**Iowa Clinical Surgical Society,** Davenport.
Apr. 28-May 1	**Iowa Medical Society Annual Meeting,** Hotel Fort Des Moines, Des Moines.

CONTINENTAL U. S.

Mar. 1-3	**American Association of Pathologists and Bacteriologists,** Drake Hotel, Chicago.
Mar. 3-7	**International Academy of Pathology (57th),** Drake Hotel, Chicago.
March 4-8	**Postgraduate Course in Diagnosis and Treatment of Cardiovascular and Pulmonary Diseases sponsored by American College of Chest Physicians,** Hotel Fontainebleau, Miami Beach.
March 5	**Advances in Medical and Nursing Care of Cancer,** University of Nebraska, College of Medicine, Omaha.
March 7-8	**The Doctor and His Hospital, Institute of Medicine of Chicago,** Pick-Congress Hotel, Chicago.
Mar. 8-10	**Colorado Medical Society (Winter Clinics),** Brown Palace, Denver.
Mar. 11-13	**American College of Surgeons (Sectional Meeting for Doctors and Nurses),** Williamsburg Inn, Williamsburg, Virginia.
Mar. 11-13	**Postgraduate Conference on Pediatrics presented by University of Kansas Medical Center,** Battenfeld Auditorium, Kansas City, Kansas.
March 12-14	**Michigan Academy of General Practice,** Sheraton-Cadillac Hotel, Detroit.
Mar. 13-15	**International Symposium on Radiation Therapy, sponsored by Memorial Sloan-Kettering Cancer Center,** New York.
Mar. 14-15	**Seventh National Symposium on Neurohumoral Control of the Circulatory System sponsored by the Heart Association of Southeastern Pennsylvania,** Sheraton Hotel, Philadelphia.
Mar. 14-16	**Arizona Academy of General Practice,** Ramada Motor Hotel, Tucson.
March 14-16	**Clinical Selection of Patients for Cardiac Surgery,** Mayo Graduate School of Medicine (University of Minnesota) and Mayo Clinic, Rochester.
March 15-16	**14th Annual AMA Conference of State Mental Health Representatives,** Drake Hotel, Chicago.
Mar. 17-21	**International Anesthesia Research Society (42nd Congress),** Sheraton-Palace Hotel, San Francisco.
Mar. 18-20	**Postgraduate Course on Otorhinolaryngology, University of Kansas Medical Center,** Battenfeld Auditorium, Kansas City, Kansas.
Mar. 18-20	**American Academy of Pediatrics Annual Spring Session,** Regency Hyatt House, Atlanta, Georgia.
March 18-22	**Psychiatry and the Internist,** Albany Medical College of Union University, Albany.
Mar. 18-22	**Refresher Course for American Board Candidates in Obstetrics and Gynecology,** Marquette School of Medicine, Milwaukee.
March 21-22	**Abnormal Labor and Practical Endocrinology,** University of Nebraska College of Medicine, Omaha.
Mar. 21-24	**International Society of Cranio-Facial Biology,** San Francisco Hilton Hotel, San Francisco.
Mar. 22-23	**20th Annual Midwest Cancer Conference, sponsored by the Kansas Division, American Cancer Society,** Broadview Hotel, Wichita.
Mar. 22-23	**Montana Medical Association (Interim Session),** Holiday Motel, Helena.
March 22-23	**Second National AMA Congress on Socio-Economics of Health Care,** Palmer House, Chicago.
Mar. 22-27	**California Medical Association,** Fairmont-Mark Hopkins, San Francisco.
Mar. 23-24	**Missouri Society of Anesthesiologists,** Kansas City, Missouri.
Mar. 23-30	**American Society of Clinical Pathologists (Interim),** Roosevelt Hotel, New Orleans.
March 24-30	**American Society of Clinical Pathologists,** Roosevelt Hotel, New Orleans.
Mar. 25-29	**American College of Allergists,** Denver-Hilton, Denver.
March 26-28	**Indiana Academy of General Practice,** Murat Temple & Marott Hotel, Indianapolis.
March 27-28	**Third Annual Sports Medicine Conference, sponsored by University of Wisconsin,** University of Wisconsin Campus, Madison.
March 27-30	**Current Concepts in Physiology of Respiration, Circulation and Electrolyte Metabolism, co-sponsored with American Physiological Society,** Boston.
March 28-29	**The Crying Child—Medical Emergency,** University of Nebraska College of Medicine, Omaha.
Mar. 28-31	**Missouri State Medical Association,** Muehlebach Hotel, Kansas City, Missouri.
March 29-30	**21st AMA Conference on Rural Health,** Olympic Hotel, Seattle, Washington.
March 29-31	**American Society of Internal Medicine,** Statler-Hilton, Boston.
Mar. 29-31	**Fourth Annual Arizona Chest Disease Symposium,** Tucson.
Mar. 30-Apr. 3	**American Society of Abdominal Surgeons,** Sherman House, Chicago.
Apr. 1-5	**44th Annual Session American College of Physicians in association with The Royal College of Physicians of London,** Sheraton-Boston Hotel, Boston.
Apr. 4-6	**Symposium on Fetal Medicine,** University of Wisconsin Medical Center, Madison.

(Continued on page 222)

Sustained circulatory, respirato and cerebral stimulation for t





(fewer absent doses by absent-minded patients)

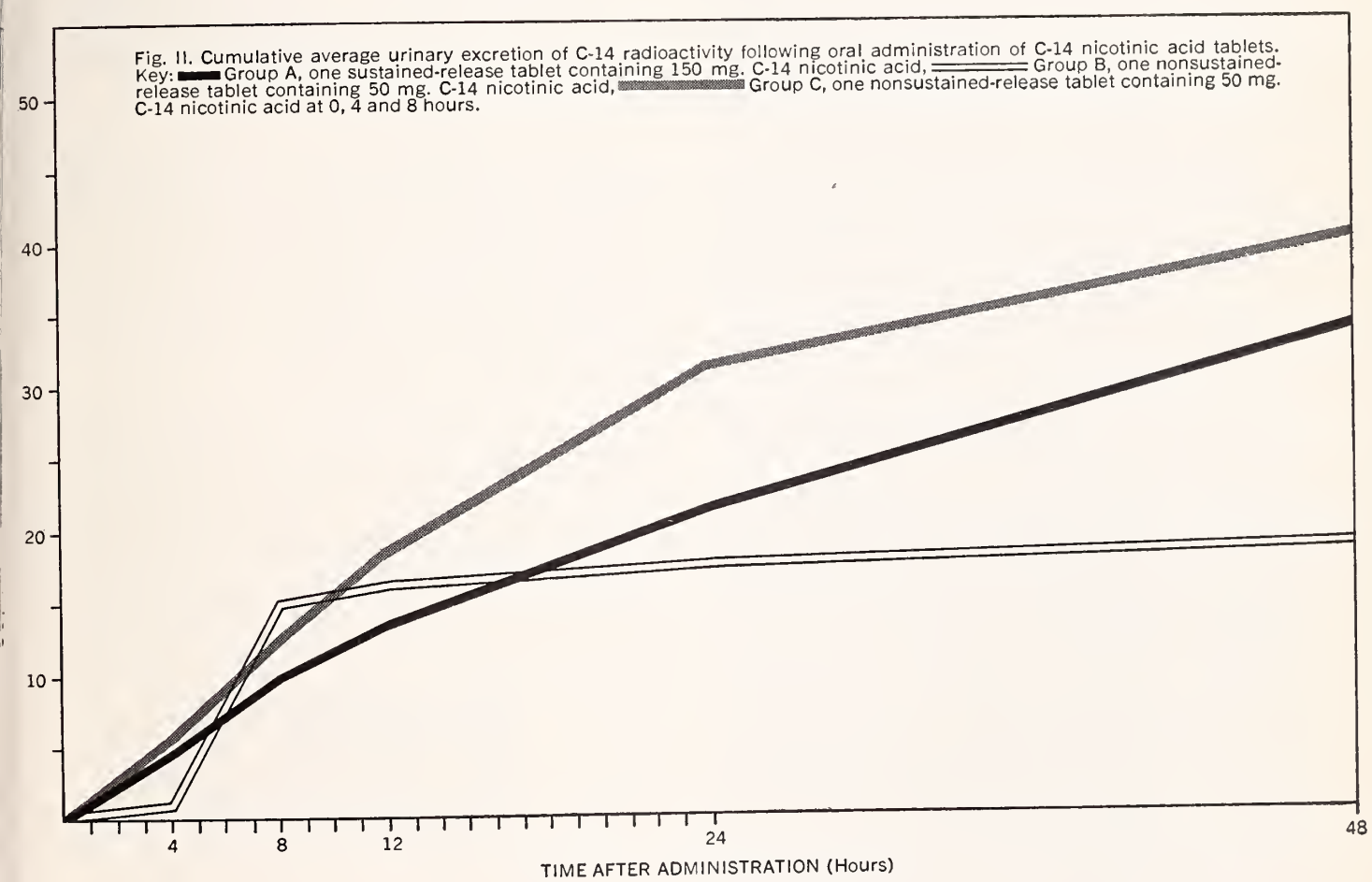
Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

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References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

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Coming Meetings

(Continued from page 219)

Apr. 4-6 **Third AMA Conference on Health Education of the Public**, Pick-Congress Hotel, Chicago.

Apr. 7-11 **American Association of Neurological Surgeons (founded as the Harvey Cushing Society)**, Conrad-Hilton, Chicago.

Apr. 7-11 **American Radium Society**, Fontainebleau Hotel, Miami Beach.

Apr. 8-9 **Practical Psychotherapy in the GP's Office**, University of Nebraska College of Medicine, Omaha.

Apr. 9-12 **American Association of Anatomists**, Jung Hotel, New Orleans.

Apr. 10 **American Society of Therapeutic Radiologists**, Fontainebleau Hotel, Miami Beach.

Apr. 11-13 **American Association for Cancer Research (59th Annual)**, Haddon Hall, Atlantic City.

Apr. 15-19 **Postgraduate Course on High Risk Infant Care**, University of Colorado School of Medicine, Denver.

Apr. 15-20 **Federation of American Societies for Experimental Biology**, Convention Hall, Atlantic City.

Apr. 16-19 **West Virginia Academy of Ophthalmology and Otolaryngology (National Spring Meeting)**, Greenbrier Hotel, White Sulphur Springs.

Apr. 17-20 **12th Annual Post Graduate Course on Fractures and Other Trauma, presented by Chicago Committee on Trauma of the American College of Surgeons**, John B. Murphy Memorial Auditorium, Chicago.

Apr. 17-19 **American Surgical Association**, Sheraton-Boston Hotel, Boston.

Apr. 17-19 **Management and Care of Respiratory Insufficiency**, University of Colorado School of Medicine, Denver.

Apr. 18-19 **Coronary Care Units in Community Hospitals**, University of Nebraska College of Medicine, Omaha.

Apr. 18-20 **Tennessee Medical Association**, Reed House, Chattanooga.

Apr. 18-20 **Medical Association of the State of Alabama**, Birmingham.

Apr. 22-24 **Arkansas Medical Society**, Arlington Hotel, Hot Springs.

Apr. 22-24 **American Association for Thoracic Surgery**, Pittsburgh-Hilton Hotel, Pittsburgh.

Apr. 22-25 **Southwestern Surgical Congress**, Brown Palace, Denver.

Apr. 22-25 **American Orthopaedic Association**, Boca Raton Club, Boca Raton, Florida.

Apr. 22-25 **1968 American Industrial Health Conference**, Hilton Hotel, San Francisco.

Apr. 22-26 **Clinical Endocrinology—Recent Advances in Diagnosis and Treatment**, Mayo Graduate School of Medicine (University of Minnesota) and Mayo Clinic, Rochester.

Apr. 22-27 **American Academy of Neurology**, Pick-Congress Hotel, Chicago.

Apr. 23-27 **Arizona Medical Association**, Safari Hotel, Scottsdale.

Apr. 25-27 **Postgraduate Course in Clinical Dermatology**, University of Colorado School of Medicine, Denver.

Apr. 25-28 **New York Roentgen Society**, Waldorf-Astoria, New York.

Apr. 25-28 **American Academy of Physical Medicine and Rehabilitation**, Sheraton-Chicago, Chicago.

Apr. 27-May 1 **American Academy of Facial Plastic and Reconstructive Surgery**, Diplomat Hotel, Hollywood Beach, Florida.

Apr. 28 **American Association of Electromyography and Electrodiagnosis (15th Annual)**, Sheraton-Chicago Hotel, Chicago.

Apr. 28-May 1 **Kansas Medical Society**, Ramada Inn, Topeka.

Apr. 28-May 1 **American Association of Plastic Surgeons**, Shamrock-Hilton Hotel, Houston.

Apr. 29-30 **Fifth AMA Congress on Environmental Health Problems**, Drake Hotel, Chicago.

Apr. 29-May 1 **Postgraduate Course in Cine Angiographic Techniques in Cardiovascular Disease sponsored by American College of Chest Physicians**, Cleveland Clinic, Cleveland.

Apr. 29-May 2 **Nebraska State Medical Association**, Hotel Cornhusker, Lincoln.

Apr. 30-May 2 **Connecticut State Medical Society**, Hartford-Hilton Hotel, Hartford.

ABROAD

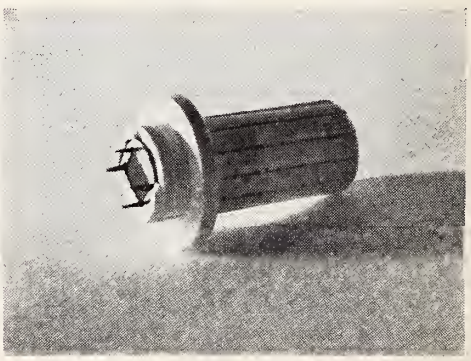
Mar. 25-27 **American College of Surgeons**, Sectional Meeting, Vancouver, B. C., Canada.

Apr. 21-27 **Inter-American Congress of Cardiology (8th)**, Lima, Peru.

Apr. 28-May 4 **Inter-American Congress of Atherosclerosis (3rd)**, Buenos Aires.

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The Month in Washington

Washington, D. C.—Dr. Dwight L. Wilbur, president-elect of the American Medical Association, warned that physicians will resist any effort to establish national medical standards under the Regional Medical Programs. But he predicted that the medical profession will cooperate enthusiastically if the programs are carried out on a voluntary cooperative basis. Dr. Wilbur spoke at a conference on Regional Medical Programs sponsored by the Department of Health, Education and Welfare.

"If the program in fact is clearly one designed to catalyze and to facilitate the development of better programs than now exist to serve patients and their physicians, it will undoubtedly receive enthusiastic cooperation from the medical profession and related groups," Dr. Wilbur said. "We know that the law and its legislative history stress the voluntary cooperative nature of the program and that interference with existing patterns is specifically prohibited. . . .

"Unlike many other countries, our nation has reached its preeminence in many areas of activity because of this unique combination of multiple independent focal points of activity cooperating on a voluntary basis to achieve a commonly desired goal. . . .

"If RMP maintains its current emphasis on the working together of regional groups, it will fulfill its purpose of improving the quality, accessibility and availability of health care, physician and institutional performance, and consumer satisfaction.

"On the other hand, if RMP becomes an instrument for the establishment of national standards with the coercive compliance compelled by such standards, it will arouse nationwide resistance from physicians, institutions, and allied health professionals. What can be gained by cooperation and meaningful participation will surely be lost if the use of coercive power, which for the moment lies dormant in Public Law 89-239, becomes its dominant characteristic. . . .

"RMP is in a strategic position to bring about changes acceptable both to physicians and their patients that will improve performance and patient satisfaction without undermining patterns of behavior that are traditional, and, more significant, considered by the medical profession essential to the preservation of high quality care."

* * *

The American Medical Association told Congress that weight reduction is a leading health area for quackery. The AMA position on weight reduction, particularly where so-called diet pills are involved, was outlined by Drs. Theodore B. Van Itallie of New York City, a member of the Council on Foods and Nutrition, and Harry C. Shirkey of Birmingham, Alabama, vice-chairman of the Council on Drugs, in testimony before the Senate Antitrust and Monopoly Subcommittee.

The Subcommittee was investigating reports that some osteopaths and physicians were making large incomes from assembly-line administration of multi-colored "diet" pills containing such drugs as barbiturates, thyroid extract, amphetamines, thiazine, diuretics, laxatives and various hormones. Officials from Illinois and Oregon testified that such pills were involved in at least 20 deaths in their states.

"Perhaps in no other area of health and medical problems do we encounter as much food faddism and quackery," Dr. Van Itallie testified. "The obese are extremely gullible, forever willing to believe that someday a gadget, a diet, a pill, or a book will lead to the miracle of easy and painless reduction of weight. While most of the quackery originates with health hucksters who have no scientific background, training or qualifications in the medical or nutritional fields, unfortunately a physician is occasionally involved.

"The American Medical Association has long utilized its various publications to bring to the profession and the public up-to-date information on the latest scientific advances in the area of obesity control. It frequently focuses attention upon those irregular practitioners and faddists who prey upon the unsuspecting public. As the national voice of Medicine, we believe that it is incumbent upon us to help protect the public from those practices which have the potential of adversely affecting the public health. . . .

"A physician who assumes the responsibility for treating obesity takes on a difficult role. Few other medical disorders require the same disciplined and prolonged cooperation of the patient in their treatment. Even under the best of circumstances, the results of treatment become apparent slowly. The inherent handicaps may strain the busy physician's patience and tempt him to resort to unsound methods of treatment. He must have a clear understanding of the physiological and psychological problems of obesity in order to treat it wisely."

Dr. Shirkey broke down weight drugs into seven general classifications: (1) cardiac glycosides; (2) hormones, chiefly thyroid; (3) diuretics; (4) anorexiants (appetite suppressants); (5) laxatives; (6) sedatives; and (7) antispasmodics. Of them he said:

Cardiac glycosides: "Their use for obesity is reprehensible and may well have contributed to the few reported deaths of patients receiving such treatment."

Hormones—Thyroid: "There are at least three irrationalities . . . in this hormonal approach to the treatment of obesity."

Diuretics: "There is no rational basis for the use of diuretic drugs in the treatment of simple obesity."

Anorexiants: "Amphetamines are useful as a crutch to help the patient become accustomed to a rigorous reducing diet. But long-term administration is not justified because they tend to become less effective and, in addition, can lead ultimately to habituation."

Laxatives: "There is little rational basis for the use of laxatives in the treatment of obesity."

* * *

President Johnson said the administration would take additional steps to abate the increases in health care costs and to increase the numbers of health personnel. In his economic message to Congress, he said: "The supply of qualified health personnel has lagged behind the expanding demand. I will shortly propose new measures to increase this supply. Last year, medical care prices rose 7 per cent, more than twice as fast as other prices. I shall propose new measures to slow down the spiraling cost of health care."

In his State of the Union message, the President included in a list of "absolutely intolerable" conditions which he said had existed for many years: "Hospital and medical costs are high, and they are rising." He did not amplify the brief statements in either of those two messages, leaving the details for a later health message to Congress.

Chairman Abraham A. Ribicoff (D., Conn.) said the Senate Government Operations Committee would conduct a two-year investigation into the rise in hospital and other health care costs. He said the subcommittee's study also would be concerned with the numbers of physicians and other health personnel.

Mr. Johnson said he also would propose a child health program and stricter penalties for those who traffic in LSD and other dangerous drugs. The child health program would provide poor families over the next five years with health service from prenatal care of the mother through the child's first year.

The budget for the Department of Health, Education and Welfare allotted $66 million for medical education in fiscal 1969 (the year beginning next July 1) an increase of more than $16 million. Federal aid for allied health training was increased from $17.2 million to $19 million.

Medicare expenditures for fiscal 1969 were estimated at $6.3 billion, compared with $5.7 billion for the current fiscal year.

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Family-planning programs of the federal government would be greatly expanded. The goal is to provide birth-control information to one million women, by quadrupling the size of the family-planning services budget from $6 million to $24 million.

ACP Course on Selection of Patients for Cardiac Surgery

On March 14-16 the American College of Physicians will present a short course on The Clinical Selection of Patients for Cardiac Surgery, at the Mayo Clinic and the Mayo Graduate School of the University of Minnesota, in Rochester.

Improvements in the diagnosis and understanding of cardiac disease in association with rapidly changing and improving surgical technics have resulted in continual alteration in the criteria for the selection of patients for cardiac surgery. The course will emphasize those features in the patient's evaluation which allow proper selection and proper timing. Gray zones where differences of opinion exist will be discussed fully. Congenital and acquired mechanical problems will be included, as well as coronary artery disease.

Because a limit will be placed on the number who may attend, advance registration is essential. Address Edward C. Rosenow, Jr., M.D., executive director, American College of Physicians, 4200 Pine Street, Philadelphia 19104. The fee is $60 for ACP members, or $100 for non-members.

March Courses at U. of Nebraska College of Medicine

On March 21 and 22 the University of Nebraska College of Medicine will present a short course on abnormal labor and practical endocrinology. The guest faculty will include Dr. R. Peter Beck, head of obstetrics and gynecology at the University of Alberta; Dr. Stewart Fish, head of obstetrics and gynecology at the University of Tennessee; and Dr. Robert B. Jaffee, an assistant professor of obstetrics and gynecology at the University of Michigan. Twelve U. of Nebraska faculty members will also participate.

On March 28 and 29 the University of Nebraska College of Medicine will offer a course entitled "The Crying Child—Medical Emergency?" Dr. Eric Denhoff, of Providence, Rhode Island, will discuss the early detection of cerebral palsy; Dr. Lynn Thompson, the new director of the Nebraska State Health Department, will discuss the emergency transportation of pediatric patients; and Dr. Robert Kugel, head of pediatrics at the University of Nebraska, and the members of his department will discuss drugs that are useful in controlling behavior, the future of residential-care programs for the mentally retarded, and the pediatric intensive-care unit.

Each of these two courses has been accepted for 12 hours of Category I credit by the AAGP. The registration fee for each course is $40. Both courses will be held at the Eppley Cancer Institute, Forty-second and Dewey Streets, Omaha.



Blessed event?

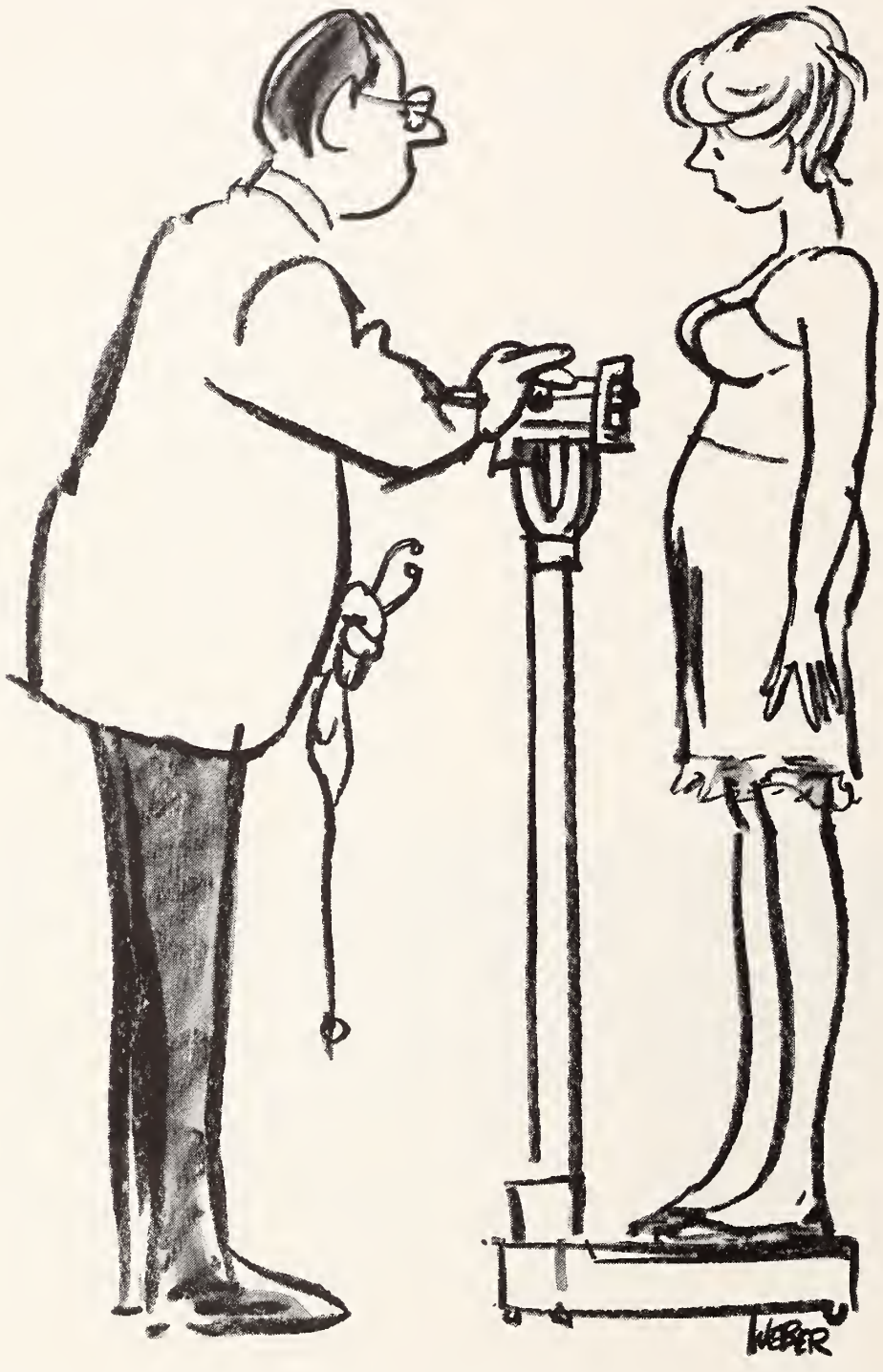
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*As shown by *in vitro* studies.
1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



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Get them while they're easily reversible.

Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.
Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Bamadex® Sequels®

Dextro-amphetamine sulfate (15 mg.) with Meprobamate (300 mg.) Sustained Release Capsules

Lederle

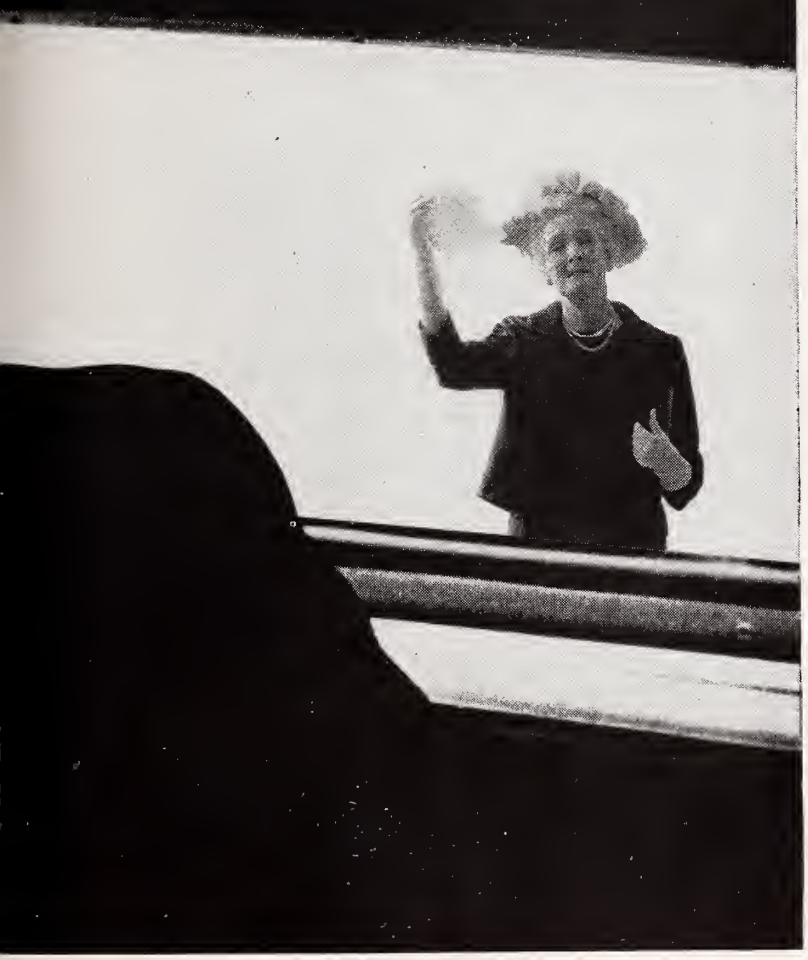
LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York

466-7



Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
Contraindications: The concomitant use of Tofrānil and monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur. Potentiation of adverse effects can be serious or even fatal. An interval of at least 7 days after M.A.O.I. therapy has been discontinued should be allowed before Tofrānil may be substituted. Initial Tofrānil dosage should be low, increases should be gradual, and the patient's progress should be carefully observed.
Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, Tofrānil should not be used during the first trimester of pregnancy.
Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment with Tofrānil. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy.
Because of its anticholinergic effect, caution should be observed in prescribing Tofrānil for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hyperthyroid patients and in patients receiving thyroid medication when Tofrānil was added to the regimen.
Imipramine may block the pharmacologic activity of guanethidine and other related adrenergic neuron-blocking agents.
The drug is not recommended at the present time in patients under 12 ye of age.
Adverse Reactions: Dryness of the mouth, tachycardia, constipation, di turbances of accommodation, sweating, dizziness, weight gain, urinary frequency or retention, nausea and vomiting, peripheral neuritis, mild parkinson-like syndrome, tremors, rare cases of falling in elderly patients, confusional states (with such symptoms as hallucinations and disorientation), activation of psychosis schizophrenics and agitation (includ

When a milestone in life is marred by depression...



Often in the mind of the lonely, widowed, depression-prone individual, she's not gaining a daughter...she's losing a son. The occasion may be marred by such symptoms of depression as feelings of sadness, incapacity, helplessness and hopelessness.

In about 3 out of 4 cases, Tofrānil relieves symptoms of primary depression.

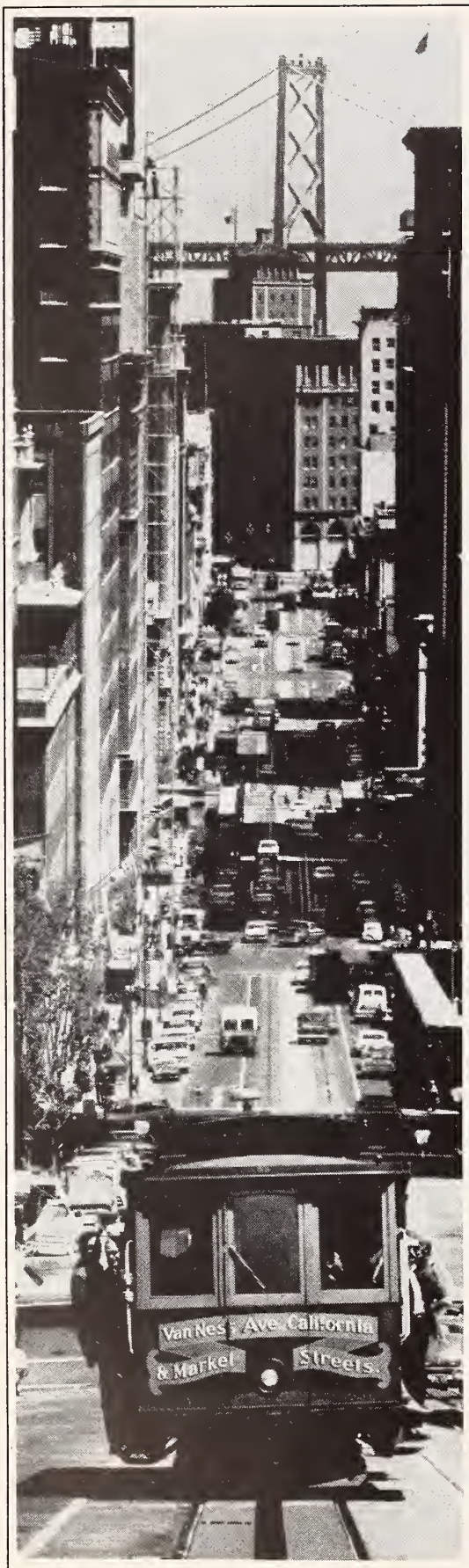
As maintenance therapy in primary depressive illness, it helps prevent relapse.

Although toxic reactions severe enough to require discontinuation of Tofrānil are uncommon, in patients with cardiovascular disease, thyroid disorders, increased intraocular pressure, or in those receiving anticholinergics (including antiparkinsonism agents), the special precautions listed in the Prescribing Information should be carefully observed. The use of Tofrānil in patients receiving M.A.O.I.'s is contraindicated.

Tofrānil® imipramine hydrochloride
Geigy

hypomanic and manic episodes) ich may require dosage reduction d/or addition of a tranquilizer or nporary discontinuation of the drug, leptiform seizures, orthostatic potension and substantial blood ssure fall in hypertensive patients, rpura, transient jaundice, bone mar- v depression including agranulocy- is, sensitization and skin rash luding photosensitization, eosino- ilia, and mild withdrawal symptoms sudden discontinuation after pro- ged treatment with high doses. casional hormonal effects (im- tence, decreased libido, and estro- nic effects) may be observed. opine-like effects may be more nounced (e.g. paralytic ileus) in sceptible patients and in those ng anticholinergic agents (includ- antiparkinsonism drugs).
tpatient Adult Dosage: Initially, mg. daily, increased, if necessary, to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
Geriatric and Adolescent Dosage: Initially, 30 or 40 mg. daily, which may be increased according to response and tolerance. It is usually unnecessary to exceed 100 mg. daily.
A lag in therapeutic response, lasting from a few days to a few weeks, should be expected. When dosage recommendations are already being followed, increasing the dosage does not normally shorten this latency period and may increase the incidence of adverse reactions.
Availability: Tofrānil: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration.
(B)46-850-C
For complete details, please refer to the full Prescribing Information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502



SAN FRANCISCO AMA '68

The excitement of San Francisco's famous sites is waiting for you. Chinatown, the Golden Gate Bridge, Fisherman's Wharf, Telegraph Hill, will add to five memorable and stimulating convention days. Plan to attend now and look forward to an excellent convention in a city of unlimited charm.

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In addition the AMA TV network will present more than 40 hours of convention news.

Reserve now for the Scientific Awards Dinner in honor of the Scientific Award Winners—Wednesday, June 19, 1968. Since space is limited, we suggest you make your reservations before June 3, 1968. Tickets are $10.00 each, payable in advance.

The complete scientific program, plus forms for advance registration and hotel accommodations, will be featured in JAMA, May 6, 1968.

SAN FRANCISCO, CALIFORNIA · JUNE 16-20, 1968

AMERICAN MEDICAL ASSOCIATION'S 117th ANNUAL CONVENTION · BROOKS HALL

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains Methyclothiazide 5 mg. with Deserpidine 0.25 mg. or 0.5 mg

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains Pargyline Hydrochloride 25 mg. with Methyclothiazide 5 mg.

Indications: For treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. Not recommended for patients with mild or labile hypertension amendable to therapy with sedatives and/or thiazide diuretics alone. It is desirable to establish the dosage of Eutron by administering component drugs separately.

TM-TRADEMARK

Contraindications: Pheochromocytoma, advanced renal disease, increasing renal dysfunction, paranoid schizophrenia and hyperthyroidism. Hepatic coma has been reported as consequence of hypokalemia with thiazide therapy. Until further experience is gained not recommended for patients with malignant hypertension, children under 12, or pregnant patients.

Concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. 2 week interval should separate therapy and use of these agents.

Methyclothiazide is contraindicated in patients with known sensitivity to thiazides.

Warnings: Pargyline hydrochloride is a monoamine oxidase inhibitor. Warn patients against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When indicated, alcohol, narcotics (meperidine should be avoided), antihistamines, barbiturates, chloral hydrate, and other hypnotics, sedatives, tranquilizers, or caffeine, may be used cautiously in reduced dosage. In emergency surgery ¼ to ⅕ the usual dose of narcotics, analgesics, and other premedications should be used avoiding parenteral administration where possible. Carefully adjust dose of anesthetics to response of patient. Withdraw pargyline two weeks before elective surgery.

Warn patients about the possibility of postural hypotension. Those with angina or coronary artery disease should not increase physical activity with an improvement in well being. Pargyline may lower blood sugar.

Avoid use of enteric-coated potassium tablets, as these may induce serious or fatal small-bowel lesions consisting of stenosis with or without ulceration. These small-bowel lesions have caused obstruction, hemorrhage and perforation frequently requiring surgery. Medication should be discontinued immediately if abdominal pain, distension, nausea, vomiting or GI bleeding occurs. These products contain no added potassium salts and if added potassium intake is desired, dietary supplementation is recommended. Coated potassium tablets should be reserved for cautious use when adequate dietary supplementation is impractical. In patients with a history of allergy or asthma the possibility of sensitivity reactions should be considered.

Precautions: Measure blood pressure while patient is standing to determine antihypertensive effect. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Use with caution in patients with liver disease. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. With prolonged therapy, examine patients for change in color perception, visual fields and fundi. Also reported have been: blood dyscrasias including thrombocytopenia with purpura, agranulocytosis and aplastic anemia; elevations of BUN, serum uric acid, or blood sugar. Symptomatic gout may be induced. In surgical patients thiazides may reduce response to vasopressors and increase response to tubocurarine.

Adverse Reactions: Pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extrapyramidal symptoms have been reported in a few patients with reduced cardiac reserve.

During intensive or prolonged therapy, guard against hypochloremic alkalosis and hypokalemia (especially the latter if patient is on digitalis). Observe all patients for signs of hyponatremia ("low salt" syndrome).

Reported thiazide reactions also include anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, and pancreatitis. Nocturia has been observed with the combination.

801438

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Now...twice as much as before in each teaspoon

400,000 units of potassium penicillin V per teaspoonful

New...V-Cillin K®, Pediatric, 250 mg.

Potassium Phenoxymethyl Penicillin

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IOWA MEDICAL SOCIETY

Organized in 1850

1968 ANNUAL MEETING

April 28-May 1

Hotel Fort Des Moines and Hotel Savery

Des Moines



Hotel Fort Des Moines



RICHARD F. BIRGE, M.D.

President
Iowa Medical Society
1967-1968

GENERAL SESSIONS

Grand Ballroom—Hotel Fort Des Moines

Monday Morning, April 29

8:00 a.m. EXHIBITS

8:55 a.m. INVOCATION

Rev. Dr. Paul B. McCleave, Chicago, Illinois

9:00 a.m. "The Washington Scene"

Representative Gerald R. Ford, Washington, D. C.—Fifth District, Michigan

9:30 a.m. "Computer Diagnosis"

Peter L. Reichertz, M.D., Columbia, Missouri

10:00 a.m. RECESS TO VISIT EXHIBITS

10:45 a.m. "Tinkle Tunes and Piddle Patterns"

Walter A. Keitzer, M.D., F.A.C.S., Akron, Ohio

11:15 a.m. "The Coronary Care Unit in a Community Hospital"

James E. Crockett, M.D., Kansas City, Missouri

11:45 a.m. RECESS

12:00 m. LUNCHEON PROGRAM

"The Family Practice Concept"
Carroll L. Witten, M.D., Louisville, Kentucky, Immediate Past President, American Academy of General Practice

Monday Afternoon, April 29

2:00 p.m. THE BALDRIDGE-BEYE MEMORIAL LECTURE

Presented by the Iowa Medical Foundation

Panel Discussion: "Therapeutic Abortion"

R. Elgin Orcutt, M.D., San Francisco, California

Samuel M. Fahr, LL.B., Iowa City, Iowa

Rev. Dr. Paul B. McCleave, Chicago, Illinois—Moderator

3:00 p.m. RECESS TO VISIT EXHIBITS

3:45 p.m. "Office Neurology"

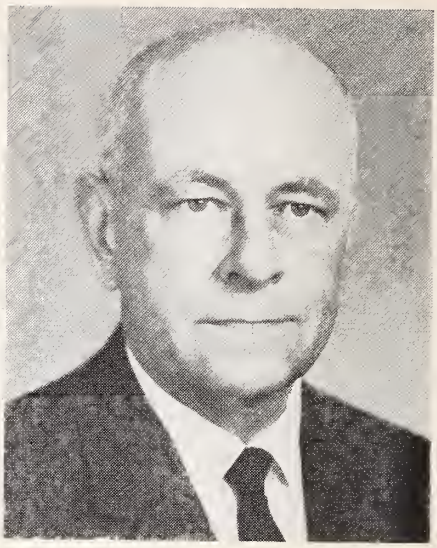
Clark H. Millikan, M.D., Rochester, Minnesota

4:15 p.m. "Radioactive Scintiscanning in the Community Hospital"

Noble W. Irving, Jr., M.D., Des Moines, Iowa

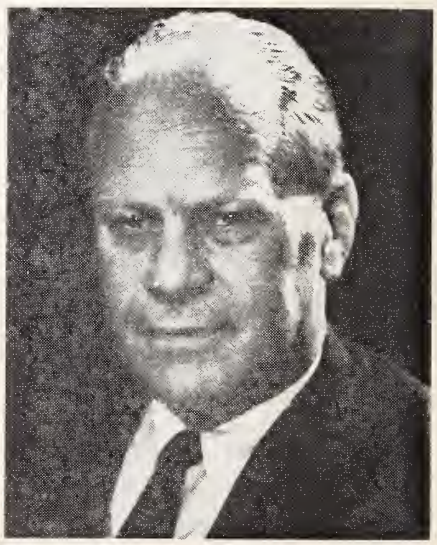
This Program Is Acceptable for
7 ELECTIVE HOURS
by the
American Academy of General Practice





Gordon P. Baird, Boston, Massachusetts (left), is vice-president of David L. Babson and Company, Inc. (Investment Counsel), a member of the Board of Directors of the Financial Technical Assistance Corporation, former secretary of T. Rowe Price Growth Stock Fund and former secretary-treasurer of T. Rowe Price New Horizons Fund. **Graham B. Blaine, Jr., M.D., Cambridge, Massachusetts** (center), is chief of psychiatry, Harvard University Health Service, member of The Board of Directors of the Family Society of Cambridge, and of the Big Brother Association of Greater Boston, and member of the American Psychiatric Association. **Henry S. Blake, M.D., Topeka, Kansas** (right), is medical commander, Stormont Vail Disaster Plan, diplomate of the American Board of Surgery, chairman of the AMA Committee on Federal Medical Services, and a past-chairman of the Board of Directors, National Blue Shield.





James E. Crockett, M.D., Kansas City, Kansas (left), is engaged in the private practice of cardiology, is an associate clinical professor of medicine at the University of Kansas Medical Center and is a diplomate of the American Board of Internal Medicine, and of the sub-specialty board in cardiovascular diseases. **Samuel M. Fahr, LL.B., Iowa City, Iowa** (center), is a professor of law in the College of Law, University of Iowa, and a member of the Iowa State Bar Association and the American Bar Association. **Congressman Gerald R. Ford, Washington, D. C.** (right), is minority leader, United States House of Representatives; Member, Republican Policy Committee and Joint Senate-House Republican Leadership; Recipient of Distinguished Congressional Service Award, American Political Science Association.

General Sessions (Continued)

Grand Ballroom—Hotel Fort Des Moines

Tuesday Morning, April 30

8:00 a.m. EXHIBITS

9:00 a.m. President's Address

Richard F. Birge, M.D., Des Moines, Iowa, President, Iowa Medical Society

9:30 a.m. "Disaster Planning: The Topeka Tornado"

Henry S. Blake, M.D., Topeka, Kansas

10:00 a.m. RECESS TO VISIT EXHIBITS

10:45 a.m. "The Future of Transplantation Surgery"

John S. Najarian, M.D., Minneapolis, Minnesota

11:15 a.m. "Medical Care in Vietnam"

James E. Whitmire, M.D., Sumner, Iowa

11:45 a.m. RECESS TO VISIT EXHIBITS

12:00 m. LUNCHEON PROGRAM

"Planning for Your Family's Education and Retirement"

Gordon P. Baird, Boston, Massachusetts, Vice President, David L. Babson and Company, Inc.

Tuesday Afternoon, April 30

2:00 p.m. THE ARTHUR ERSKINE MEMORIAL LECTURE

"A Most Perplexing Cancer"
Jack M. Layton, M.D., Tucson, Arizona

2:30 p.m. "Status Report: Title XIX"

Francis L. Land, M.D., Washington, D. C.

3:30 p.m. RECESS TO VISIT EXHIBITS

3:45 p.m. "Why Intelligent Young People Take Drugs"

Graham B. Blaine, Jr., M.D., Cambridge, Massachusetts

VISIT YOUR EXHIBITS

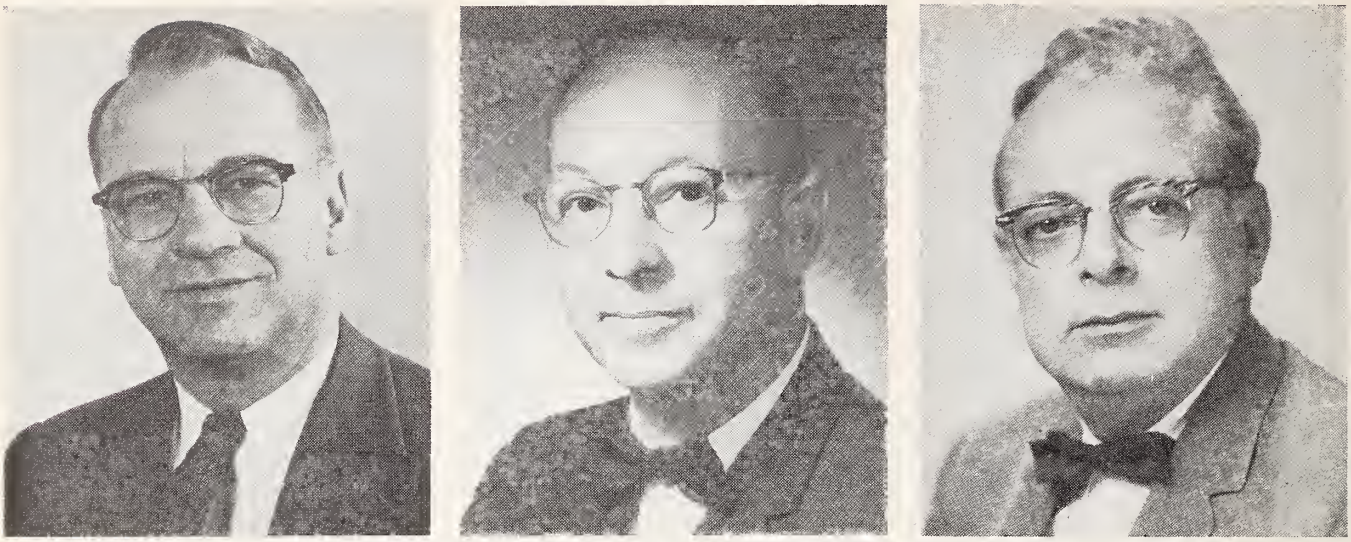
Hotel Fort Des Moines

Technical Exhibits—Mezzanine Floor

HOURS

Monday, April 29—8:00 a.m. to 5:00 p.m.

Tuesday, April 30—8:00 a.m. to 5:00 p.m.



Noble W. Irving, Jr., M.D., Des Moines, Iowa (left), is radiologist at Mercy Hospital, Des Moines, and a fellow of the American College of Radiology. **Walter A. Keitzer, M.D., F.A.C.S., Akron, Ohio** (center), is engaged in the private practice of urology, is chairman of the Department of Urology, Akron City Hospital, and is a member of the American Urological Association, of the Artificial Internal Organ Society and of the American Medical Writers Association. **Francis L. Land, M.D., Washington, D. C.** (right), is commissioner, Medical Services Administration, Social and Rehabilitation Service, United States Department of Health, Education and Welfare, past president, Indiana Academy of General Practice, member, AMA Council on Medical Education, and consultant to the Surgeon General, U. S. Air Force.



Jack M. Layton, M.D., Tucson, Arizona (left), is professor and head of the Department of Pathology, College of Medicine, University of Arizona, a diplomate of the American Board of Pathology, and of the National Board of Medical Examiners, member of the Board of Directors and of the American Society of Clinical Pathologists and the 1967 recipient of the Distinguished Service Award of the Iowa Association of Pathologists. **Rev. Dr. Paul B. McCleave, Chicago, Illinois** (center), is director of the AMA Department of Medicine and Religion, former president of the College of Emporia, Emporia, Kansas, and the recipient of an honorary Doctor of Laws degree from the University of Tulsa. **Clark H. Millikan, M.D., Rochester, Minnesota** (right), is senior consultant in neurology at the Mayo Clinic, a professor of neurology in the Mayo Graduate School of Medicine, University of Minnesota, director, Clinical Research Center, Mayo Foundation, member, American Board of Psychiatry and Neurology, and the assistant secretary of the American Neurological Association.

Special Meetings and Dinners

Saturday, April 27

PAST PRESIDENTS' DINNER

Des Moines Club

Social Hour: 6:30 p.m.—Dinner: 7:00 p.m.

Sunday, April 28

GOLF TOURNAMENT

The annual golf tournament will be held at the Willow Creek Golf Course, 63rd and Army Post Road. Physicians may begin play at any time during the day. A limited number of golf carts will be available, and should be reserved in advance by contacting the course manager. Dinner and awarding of prizes will be held at Holiday Inn South, on Fleur Drive. Reservations should be made with Harold J. McCoy, M.D., 212 Bankers Trust Building, Des Moines, 50309. Physicians who elect to play on other courses should turn their score cards in to Dr. McCoy at the dinner.

Monday, April 29

AMERICAN MEDICAL WOMEN'S ASSOCIATION, IOWA BRANCH 19

Members of the American Medical Women's Association, Iowa Branch 19, should register at the IMS Registration Desk at the Fort Des Moines Hotel. If a special meeting is arranged, specific details will be available at the Registration Desk.

IOWA ACADEMY OF SURGERY

Des Moines Club

Social Hour: 6:45 p.m.—Dinner: 8:00 p.m.
Reservations: Mrs. Sue Hyler
Executive Secretary, IAS
314 Grimes Avenue, Polk City

IOWA ASSOCIATION OF PATHOLOGISTS and IOWA SOCIETY OF MEDICAL TECHNOLOGISTS

Business Meeting (IAP)
Room 318—Hotel Fort Des Moines

Social Hour: 6:30 p.m.—Dinner: 7:30 p.m.
Johnny and Kay's Restaurant
Speaker: Don Warren—
Host of WHO "Good Morning Show"
Reservations: C. S. Cruisenberry, M.D.
310 Bankers Trust Building, Des Moines

IOWA PSYCHIATRIC SOCIETY

Des Moines Club

Social Hour: 6:30 p.m.—Dinner: 7:00 p.m.
Reservations: Robert Preston, M.D.
1405 Woodland, Des Moines

IOWA RADIOLOGICAL SOCIETY

Burgundy Room—Des Moines Club
Social Hour: 7:00 p.m.—Dinner: 8:00 p.m.
Reservations: L. L. Maher, M.D.
1419 Woodland, Des Moines

UNIVERSITY OF IOWA ALUMNI ASSOCIATION in cooperation with UNIVERSITY OF IOWA COLLEGE OF MEDICINE

Social Hour: 5:00 p.m. to 6:00 p.m.
North Room—Hotel Fort Des Moines

Tuesday, April 30

LEGISLATIVE CONTACT MEN

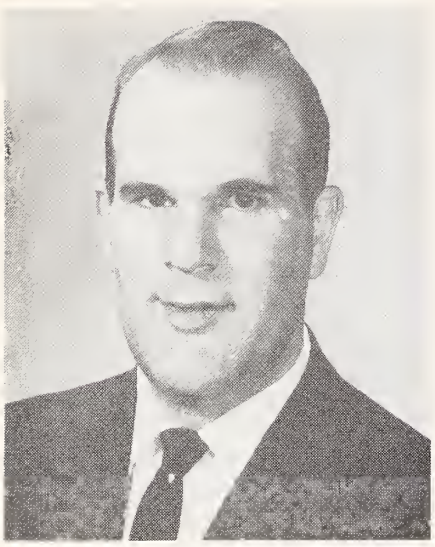
Breakfast: 7:00 a.m.
Terrace Room—Hotel Savery

PRESIDENT'S RECEPTION

North Room—Hotel Fort Des Moines
6:00 p.m.

ANNUAL BANQUET

Grand Ballroom—Hotel Fort Des Moines
7:00 p.m.

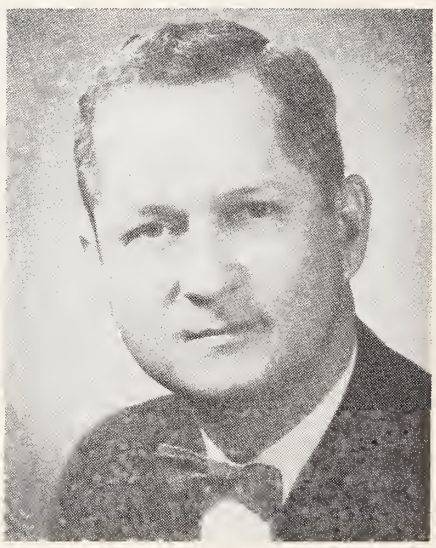






John S. Najarian, M.D., Minneapolis, Minnesota (left), is professor and chairman of the Department of Surgery, College of Medical Sciences, University of Minnesota, a diplomate of the American Board of Surgery, Markle Scholar in Academic Medicine, 1964-69, and special consultant to the Clinical Research Training Committee, of the Institute of General Medical Sciences, National Institutes of Health. **R. Elgin Orcutt, M.D., San Francisco, California** (center), is engaged in the private practice of obstetrics and gynecology, is an associate clinical professor of obstetrics and gynecology, University of California, San Francisco Medical Center, and is a member of the Board of Directors of the California Committee on Therapeutic Abortion. **Peter L. Reichertz, M.D., Columbia, Missouri** (right), is associate professor and director of radiology computer research in the School of Medicine, University of Missouri.





James E. Whitmire, M.D., Sumner, Iowa, (left), has been an AMA Volunteer Physician for Viet Nam, and is a diplomate of the American Board of Abdominal Surgery and of the International Board of Proctology. **Carroll L. Witten, M.D., Louisville, Kentucky** (right), is the immediate past-president and a member of the Executive Committee of the American Academy of General Practice, and is a member of the Board of Trustees of the Family Health Foundation of America.

PRESIDENT'S RECEPTION

6:00 p.m.

Tuesday, April 30

North Room—Hotel Fort Des Moines

Blue Shield Is Arranging the Reception
in Honor of Richard F. Birge, M.D.,
President of the Iowa Medical Society

ANNUAL BANQUET

7:00 p.m.

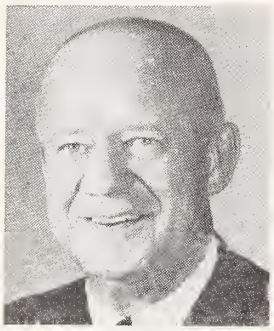
Tuesday, April 30

Grand Ballroom—Hotel Fort Des Moines

Special Entertainment
featuring the
FORT DODGE CIVIC GLEE CLUB

Tickets Will Be Sold at the Registration Desk
Hotel Fort Des Moines

Program Committee



Elmer M. Smith, M.D.
Chairman



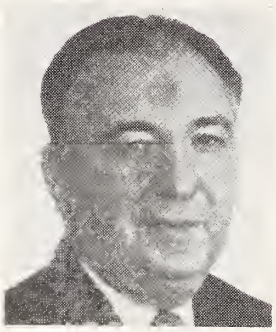
John R. Kersten, M.D.
Co-chairman



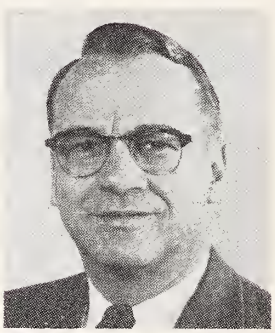
Erling Larson, Jr., M.D.



L. J. O'Brien, M.D.



H. E. Rudersdorf, M.D.



Noble W. Irving, Jr., M.D.



F. W. Stamler, M.D.

EARLY-BIRD BREAKFASTS
(Coffee and Rolls)

8:00 a.m. to 9:00 a.m.

Monday, April 29
Tuesday, April 30

North Room—
Hotel Fort Des Moines

Courtesy of Blue Shield

"THE WASHINGTON SCENE"

presented by

The Honorable Gerald R. Ford
Washington, D. C.

Minority Leader
United States House of Representatives

9:00 a.m.—Monday, April 29
Grand Ballroom—
Hotel Fort Des Moines

TECHNICAL EXHIBITORS

Abbott Laboratories, North Chicago, Illinois
Ayerst Laboratories, New York, New York
Blue Shield, Des Moines, Iowa
CIBA Pharmaceutical Company, Summit, New Jersey
Creative Systems, Inc., Waterloo, Iowa
Dictaphone Corporation, Des Moines, Iowa
Doctors Supply, Inc., Iowa City, Iowa
Dome Laboratories, New York, New York
Encyclopaedia Britannica, Inc., Chicago, Illinois
Geigy Pharmaceuticals, Ardsley, New York
Juran & Moody, Inc., St. Paul, Minnesota
Lazy M Shoes, Inc., Des Moines, Iowa
Eli Lilly and Company, Indianapolis, Indiana
J. B. Lippincott Company, Philadelphia, Pennsylvania
Loma Linda Foods, Riverside, California
Mead Johnson Laboratories, Evansville, Indiana
Medical Electronics, Waterloo, Iowa
The Medical Protective Company, Fort Wayne, Indiana
Merck Sharp & Dohme, West Point, Pennsylvania
Milex, Omaha, Nebraska
Monarch Life Insurance Company, Des Moines, Iowa
Parke, Davis & Company, Detroit, Michigan
Pepsi-Cola Bottlers of Iowa, Des Moines, Iowa
Physicians & Hospitals Supply Company, Minneapolis, Minnesota
Picker X-Ray, Midwest, Inc., Omaha, Nebraska
Wm. P. Poythress & Company, Inc., Richmond, Virginia
Postal Investment Company, Jefferson City, Missouri
Professional Office Buildings, Inc., Madison, Wisconsin
The Prouty Company, Des Moines, Iowa
J. B. Roerig & Company, New York, New York
Sandoz Pharmaceuticals, Hanover, New Jersey
W. B. Saunders Company, Philadelphia, Pennsylvania
Schering Laboratories, Union, New Jersey
G. D. Searle & Company, Chicago, Illinois
Siemens Medical of America, Addison, Illinois
Standard Medical & Surgical Company, Des Moines, Iowa
Stuart Division, Atlas Chemical Industries, Inc., Pasadena, California
Ulmer Pharmacal Company, Minneapolis, Minnesota
The Upjohn Company, Kalamazoo, Michigan
Wallace Pharmaceuticals, Cranbury, New Jersey
Warner-Chilcott Laboratories, Morris Plains, New Jersey
Westwood Pharmaceuticals, Buffalo, New York

Luncheon Programs

Monday, April 29
12 O'Clock Noon

General Session
Grand Ballroom—Hotel Fort Des Moines

THE FAMILY PRACTICE CONCEPT

Carroll L. Witten, M.D.
Louisville, Kentucky
Immediate Past President
American Academy of General Practice

Tuesday, April 30
12 O'Clock Noon

General Session
Grand Ballroom—Hotel Fort Des Moines

PLANNING FOR FAMILY EDUCATION AND RETIREMENT

Gordon P. Baird
Boston, Massachusetts
Vice President
David L. Babson and Company, Inc.

Luncheon Tickets Will Be Sold at the Registration Desk

The House of Delegates

Open to All Members

First Meeting—Sunday
April 28, 9:00 a.m.

Grand Ballroom
Savery Hotel

Roll Call

Approval of the Minutes of the Meeting held on April 19, 1967

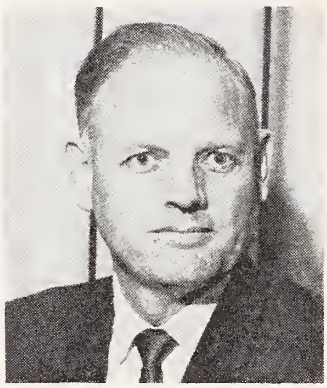
Reports of Officers

Nominations

Reports of Committee Chairmen

Memorials and Communications

New Business



Paul M. Kersten, M.D.
Speaker

Second Meeting—Wednesday
May 1, 8:00 a.m.

Grand Ballroom
Savery Hotel

Roll Call

Reading of Minutes

Election of Officers

Reports of Committee

Unfinished Business

New Business

Adjournment

INSTALLATION OF THE PRESIDENT

C. W. Seibert, M.D., president-elect, will be installed as President of the Iowa Medical Society on Wednesday, May 1, immediately following adjournment of the House of Delegates.

SOCIAL HOUR

for
All Members of the Iowa Medical Society and Their Wives
5:00 p.m. to 6:00 p.m.
Monday, April 29
North Room—Hotel Fort Des Moines
Sponsored by
THE UNIVERSITY OF IOWA ALUMNI ASSOCIATION
in cooperation with
THE UNIVERSITY OF IOWA COLLEGE OF MEDICINE

THE BALDRIDGE-BEYE MEMORIAL LECTURE

presented by the
Iowa Medical Foundation
Monday, April 29—2:00 p.m.
Panel Discussion
"Therapeutic Abortion"

THE ARTHUR ERSKINE MEMORIAL LECTURE

Tuesday, April 30—2:00 p.m.
"A Most Perplexing Cancer"

Scientific Articles

Recent Advances in the Treatment Of Dupuytren's Disease*

JULIAN M. BRUNER, M.D.
Des Moines

THE PALMAR FASCIA serves a useful function throughout life by reinforcing and strengthening the heavy skin in the hollow of the hand. In middle age, however, this fascia often undergoes a hyperplastic change that may progress to a disabling contracture of the fingers which was described in 1832 by the French surgeon Dupuytren.

Some thickening of the palmar fascia without contracture often occurs during the fourth and fifth decades, but little notice is taken of it because symptoms are mild or absent. The course of the condition—whether or not contracture will occur—is unpredictable.

The term "Dupuytren's disease" denotes any stage of this process, with or without contracture. "Dupuytren's contracture" indicates that flexion deformity, mild or severe, of the digital joints has taken place. Quite commonly it is only the flexed position of the fingers that is troublesome to the patient. There is no pain, swelling or stiffness of the hand.

The racial incidence is well known. It is common in the races of northern Europe, rare in the yellow race and almost unknown in Africans. It is somewhat uncommon in the Middle East, but in this age of jet travel and mingling populations, the condition is of general medical interest.

Family predisposition is striking in the affected races. Men are affected more commonly than women, in the ratio of nine to one. Contracture may involve any of the digits, but it occurs most frequently in the ring and little fingers.

Although the cause of Dupuytren's disease is not agreed upon, I believe that it should be regarded as a degenerative and not a neoplastic condition. Its onset in middle age is parallel to the onset of hypertrophic arthritis. As the digital joints become enlarged, the palmar fascia becomes thickened—a fact that one can easily verify by examining the hands of patients in a veterans' hospital. Dupuytren's disease is not arthritic, however, and it is not associated with any of the systemic diseases. It is not traumatic in origin, does not result from a single traumatic injury, and occurs just as often among desk workers as among manual laborers.

* Presented at the Middle East Medical Assembly, Beirut, Lebanon, May 12, 1967, on the occasion of the hundredth anniversary of the American University of Beirut. An excellent article on the history and recent status of that institution, "American University of Beirut," by William M. Bickers, M.D., can be found in the June 26, 1967, issue of JAMA.

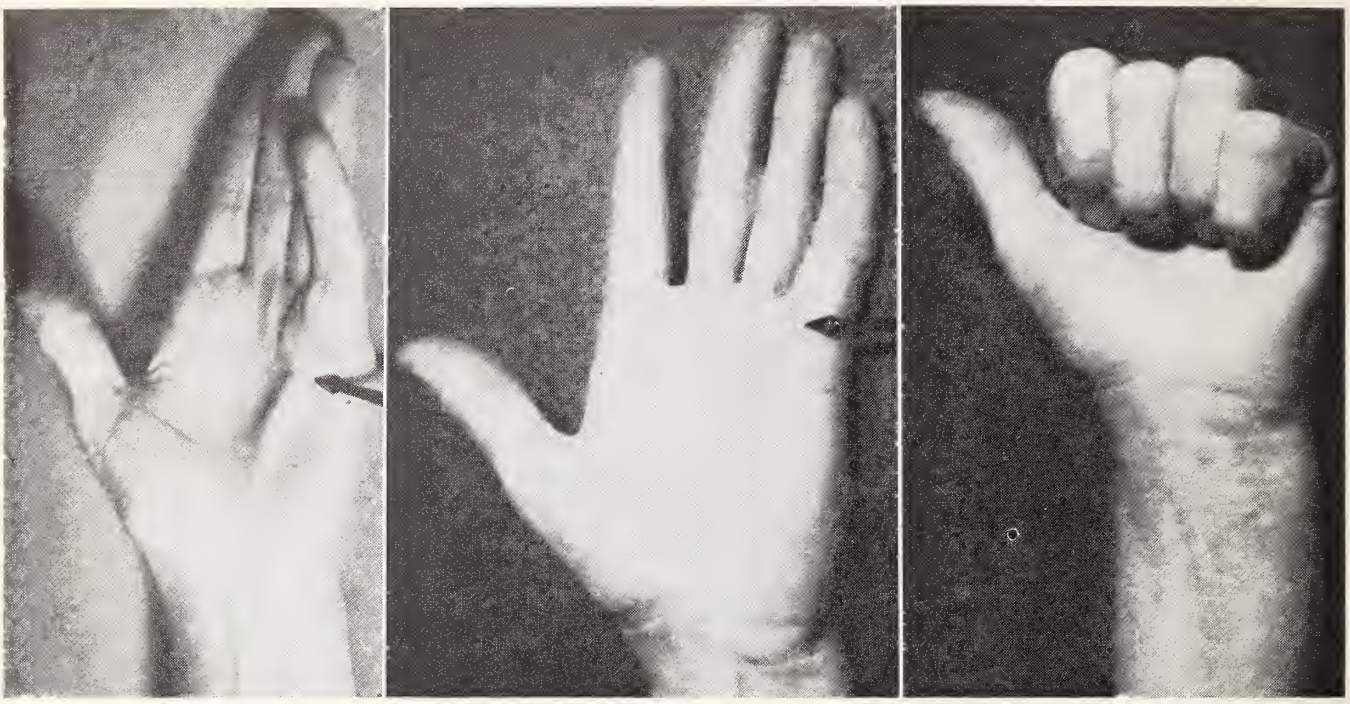


Figure 1. Case # 1, Mrs. D. B., age 62. Left, preoperative view; palmar band with early contracture of little finger. Center, postoperative view with hand open. Right, postoperative view with hand closed.

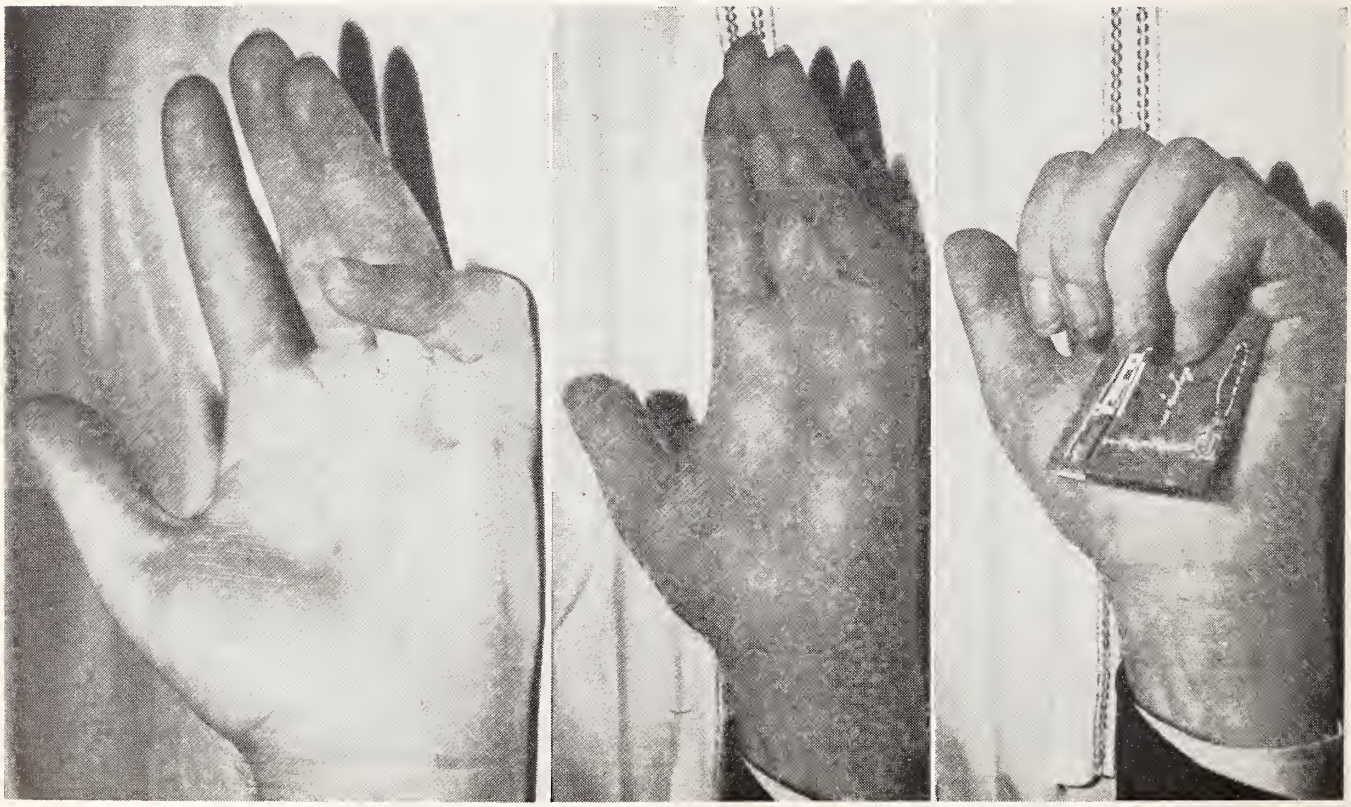


Figure 2. Case # 2, Mr. R. P., age 43. Left, preoperative contracture of little finger, accelerated by daily forced extension of the little finger by the patient. Center, postoperative view with hand open, showing incomplete relief of contracture at P.I.P. joint. Right, postoperative view with hand closed.

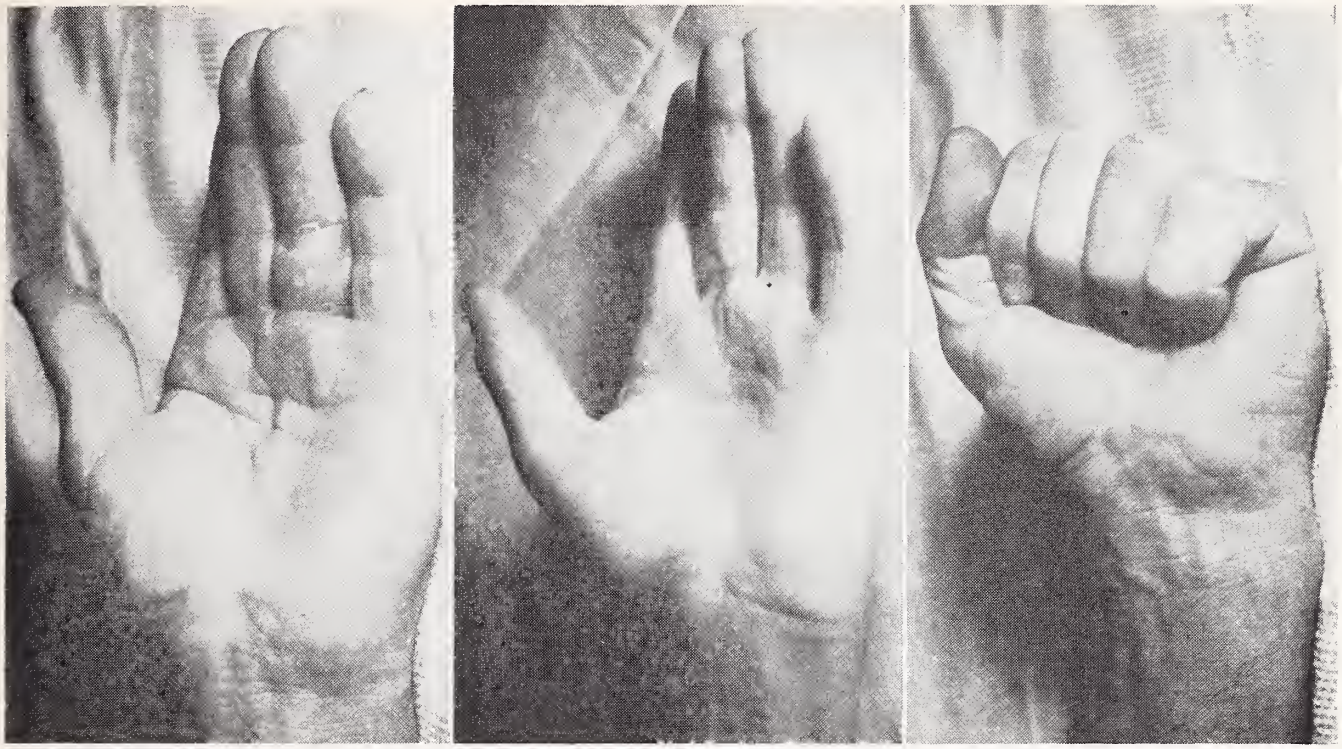


Figure 3. Case # 3, Mr. A. A., age 55. Left, heavy palmar bands and plaques with early contracture of ring finger, and infected dimple on ring finger due to retraction of skin by the fascia. Center, postoperative view with hand open. Right, postoperative view with hand closed.

What then is its real etiology? Perhaps we can say that middle age and wear and tear are the most important factors. Just as friction in the joints, year after year, results in hypertrophic joint changes, tension in the fascia may result in hyperplasia, followed by contracture in predisposed persons.

Dupuytren's disease usually has its inception as a small subcutaneous nodule in the palm, near the base of the ring or little finger. Microscopic examination of such a nodule reveals young fibroplastic tissue.

In predisposed individuals shortening occurs in the fascial bands, and thus the metacarpophalangeal joints are very gradually pulled down into a flexed position from which they cannot be extended. It then becomes increasingly difficult for the patient to open the hand fully for grasping.

Once the finger is in a position of fixed flexion, however slight, a vicious circle is created. The patient's attempts to straighten the finger produce increased and often repeated tension in the contracted band. The flexed finger catches, claw-like, on objects, compounding the strain.

The theory that microrupture of fascial fibres is the cause of Dupuytren's contracture was proposed by Skoog in 1948, and is now widely accepted. Points in evidence are as follows:

1. Iron pigment has been demonstrated in such contracted bands by Larsen and Posch, indicating recent or old hemorrhage.

2. Fasciotomy (simple cutting) of a contracted band often provides only temporary relief, because the cut ends of the fascial band become reunited by intervening scar tissue, and the dynamics of tension, stretching and rupture are again set up. On the other hand, fasciectomy (removal of a band of fascia) is often followed by a regression in the adjacent fascia and a cure of the contracture, because the lines of tension have been interrupted.

3. It has been noted clinically that forceful extension of a contracted digit by a patient only expedites the contracture, apparently causing the finger to pull down into flexion more rapidly.



Figure 4. Mr. V. A., age 65, had typical advanced contracture of the ring and little fingers.

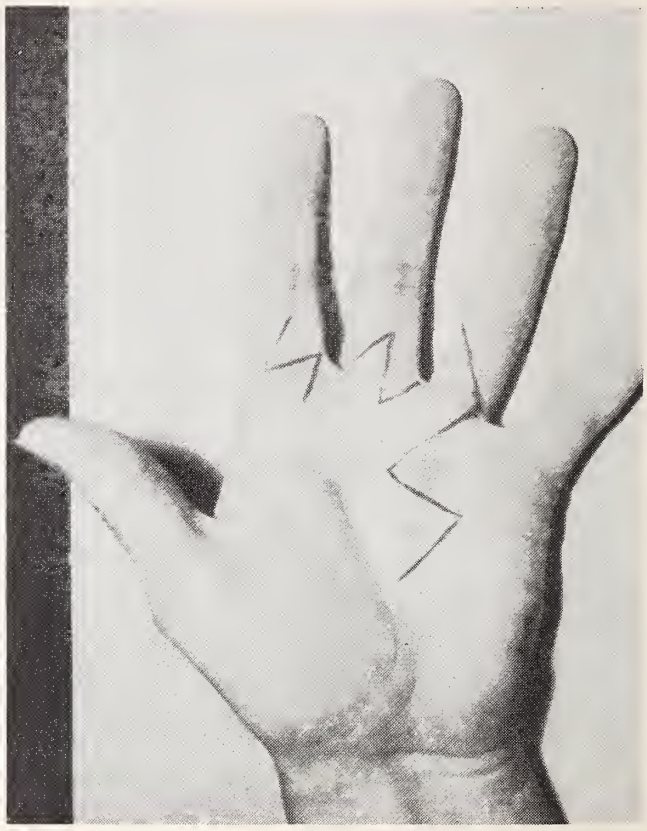


Figure 5. Suggested incisions for Dupuytren's contracture. Zig-zag incision is shown on ring finger. If Z-plasty is used, the resulting transverse line should coincide with a flexion crease. (See long and index fingers.)

Surgery has been the only successful treatment of Dupuytren's contracture, but it must be said that it has not been a panacea. Fasciotomy, the treatment used by Baron Dupuytren, has given only temporary, palliative relief. Radical fasciectomy has produced many successful results, but too many hands, previously useful in spite of the mechanical difficulty, have been made worse rather than better by the surgery.

For the past 20 years I have been interested in the surgical treatment of this condition, which is fairly common in the United States. In September, 1966, I participated in a round-table discussion of Dupuytren's disease at the S.I.C.O.T. meeting in Paris.

At that symposium ten surgeons took part including two who have produced monographs on the subject: J. T. Hueston, of Australia, and Tord Skoog, of Sweden.[9] I have just visited Professor Skoog's plastic center in Uppsala.

The trend toward conservative treatment was noteworthy, only one surgeon favoring extensive fasciectomy. The reason for this change in attitude is the conviction that radical fasciectomy cannot be done as a routine procedure without the risk of producing a worse disability—namely, protracted edema leading to a painful and stiff hand. After surgery, flexion contracture has been relieved and the patient can open his hand fully, but he can no longer close it into a tight fist. Such a result is obviously a failure, and the patient is disabled, sometimes permanently.

It is because I believe that the whole concept of surgical treatment has been revolutionized that I proposed this subject for this assembly, in a part of the world where perhaps Dupuytren's disease is not so commonly seen. A new era has been opened in the relief of this condition, which is of interest to surgeons

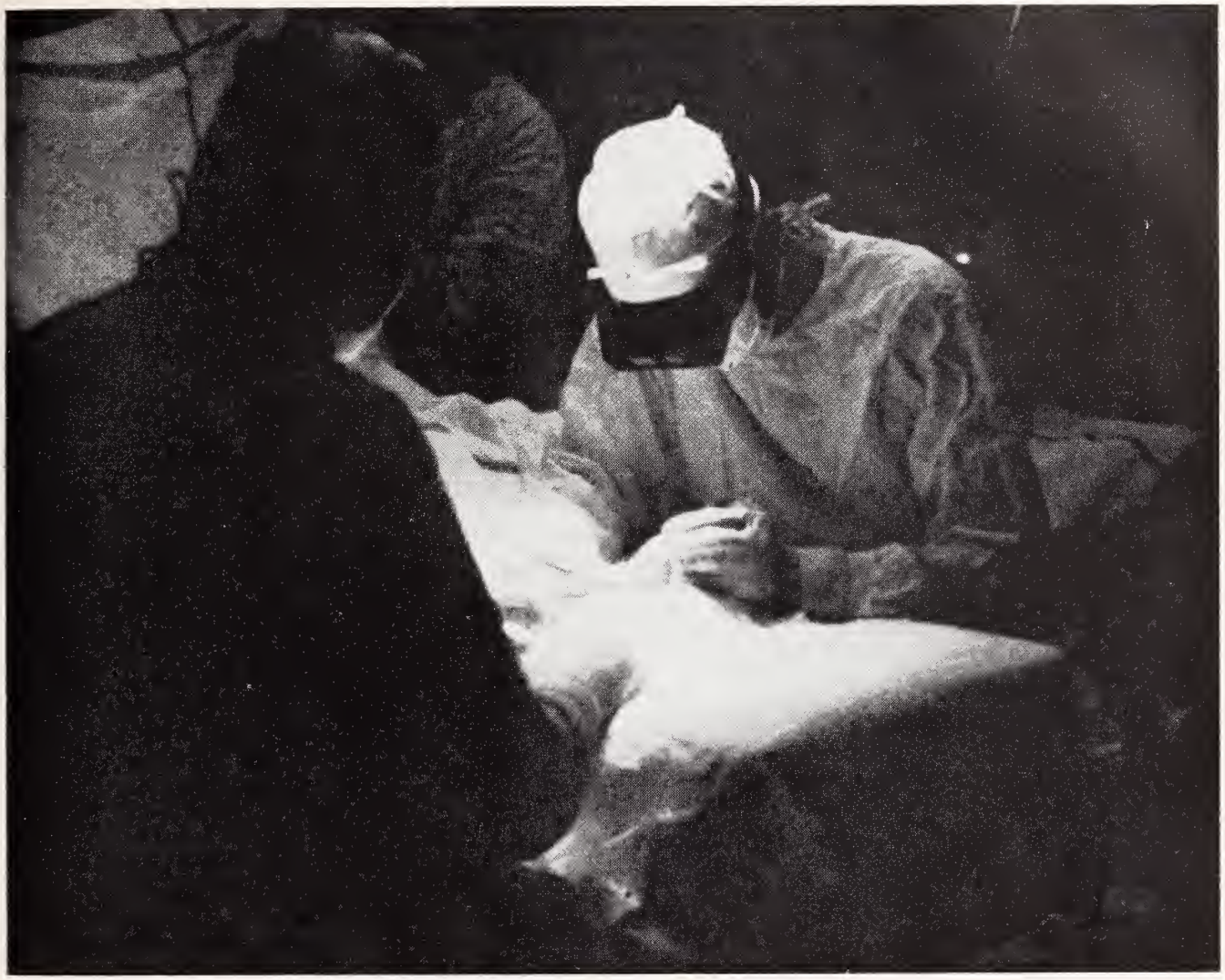


Figure 6. Use of magnifying loupe for fasciectomy.

everywhere. Two changes have been brought about:

1. *The abandonment of radical fasciectomy.* Instead, only the longitudinal pre-tendinous bands of fascia in the palm are resected. The transverse palmar ligament which lies underneath is left intact. This superficial dissection leaves undisturbed the deeper tissues of the palm containing fine blood vessels, nerves and lymphatics. We owe this change in concept to Skoog. The reduction in the incidence of postoperative edema and stiffness of the hand is truly remarkable.

2. *The abandonment of the traditional transverse incision in the palmar crease.* Though it heals with an invisible scar, it gives a poor exposure. Instead, longitudinal zig-zag incisions in the palm or in the digits are employed. Z-plasty may be used only in cases where the quality of the skin is beyond reproach, and has not been encroached upon and thinned out by the hyperplastic fascia.

Such incisions expose the longitudinal fascial bands which cause contracture of the metacarpo-phalangeal joints. Injury of digital nerves is less likely because the nerves can easily be seen. Wound disruption is minimized. The procedure facilitates earlier postoperative motion of the digits—so important in preventing stiffness of the hand.

We can now offer surgical relief of Dupuytren's contracture to many patients who in the past would have been considered unfit for fasciectomy and in whom the risk of making the hand worse would have made surgical intervention unwise.

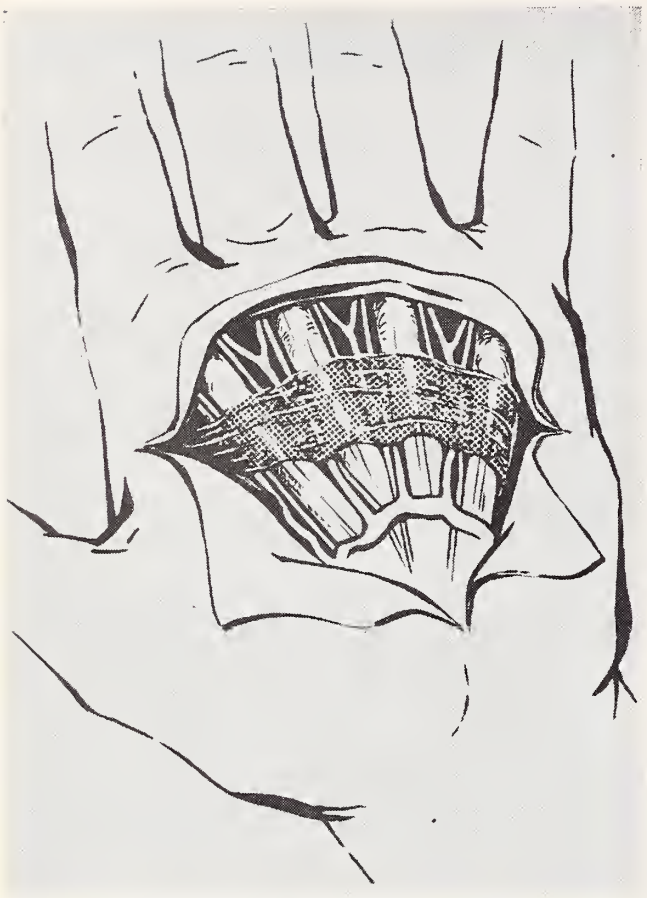


Figure 7. Drawing showing transverse fibers of palmar fascia (transverse palmar ligament). Reproduced with the permission of Professor Tord Skoog, Uppsala, Sweden.

In patients with nodules, plaques or bands of fascia in the palm or digits, but without contracture, surgery usually is not indicated. Prophylactic fasciectomy is not justifiable. In patients with early contracture, before advanced changes have taken place in the joints and in the skin, surgery is most beneficial.

SUMMARY

Today, the treatment of Dupuytren's contracture is conservative. It consists of fasciectomy of only those bands which are causing contracture. In the palm the operation is superficial. The longitudinal pre-tendinous bands are excised, the transverse fibers and deeper structures are left intact. In the proximal segment of the finger, a somewhat deeper approach may be necessary.

This operation should be done through longitudinal zig-zag incisions, which provide good exposure and clear vision of the structures being operated upon. Careful selection of cases for surgery and rejection of poor candidates are most important. Meticulous technique and aftercare are essential.

Radical fasciectomy is obsolete. We must not take the risk of disabling these middle-aged hands. Local recurrences, which are rare, and "extensions" into other parts of the hand may be dealt with, if and when they occur.

ACKNOWLEDGEMENT

I wish to thank Mr. Joseph Brown, of the Department of Medical Illustrations, Veterans Adminstration Hospital, Des Moines, Iowa, for his kind help in preparing the photographs for publication.

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3. Bruner, J. M.: Selective treatment of Dupuytren's contracture with special reference to complications and indications for treatment. Transactions of the International Society of Plastic Surgeons, Edinburgh, Livingstone, 1960. p. 244.

4. Larsen, R. D., Takagishi, N., and Posch, J. L.: Pathogenesis of Dupuytren's contracture: Experimental and further clinical observations. J. Bone & Joint Surg., **42A**: 993-1007, (Sept.) 1960.

5. Hueston, J. T.: Dupuytren's Contracture. Edinburgh, E. & S. Livingstone, Ltd., 1963.

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7. Skoog, T.: Dupuytren's contraction, with special reference to aetiology and improved surgical treatment; its occurrence in epileptics; note on knuckle-pads. Acta chir. Scandinav., **96** (supp. 139):1-190, 1948.

8. Skoog, T.: Dupuytren's contracture: pathogenesis and surgical treatment. Surgical Clinics of North America, **47** (No. 2):433-444, (April) 1967.

9. Maladie de Dupuytren, publié sous les auspices du Groupe d'Etude de la Main. Paris L'Expansion Scientifique Française, 1966.

At the IMS Annual Meeting

Plan to attend the

President's Reception and Annual Banquet

Tuesday, April 30

Hotel Fort Des Moines

The Muscular Dystrophies in Iowa

JAMES W. HANSON and
HANS ZELLWEGER, M.D.
Iowa City

In recent years, as a result of the widespread use of the electron microscope in ultrastructural investigations, several previously unrecognized myopathies have been added to the already considerable list of disorders of muscle. That tool and some others recently developed, such as histochemical and immunologic technics, have expanded our understanding of previously recognized disorders of the neuromuscular apparatus. The largest single group of myopathies continues to be the muscular dystrophies (MDs), of which we have seen and followed 144 cases in the past eight years. In light of our present understanding of those disorders and of the considerable diagnostic, prognostic and genetic counseling problems that they present, we feel justified in briefly reviewing our case material and summarizing important points in the diagnosis and management of this group of disorders.

The muscular dystrophies are a group of genetically determined, primary degenerative myopathies of uncertain pathogenesis. They share certain typical (though not pathognomonic) histologic and ultrastructural alterations, a myopathic electromyogram (EMG), and a clinical course characterized by muscular weakness and wasting, usually progressive.

Mr. Hanson is a junior medical student who holds a research fellowship in the Department of Pediatrics, and Dr. Zellweger is a professor of pediatrics. The project reported here was sponsored by a grant from the National Foundation for Neuromuscular Disorders and PHS grant 5P01NB05489-02.

CLINICAL DIAGNOSIS

Though it is not our intention to present an exhaustive differential diagnosis for disorders which may present with manifestations of muscle weakness and atrophy, a systematic clinical approach can often help physicians to distinguish myopathic processes from neuropathies and some supraspinal hypotonias. The latter, which have been discussed elsewhere,[1] are not usually progressive. Primary neuropathic disorders, though clinically similar to myopathies, can often be distinguished from them through the use of the EMG, serum enzyme studies and, particularly, muscle biopsy. The last of those examinations is often critical, especially in differentiating between the MDs and some of the more frequent "pseudomyopathic" types of lower motor neuron disease such as the spinal muscular atrophies. A comparison of histologic alterations found in these two types of disease process is presented in Table 1. As is shown there, both light and electron microscopic differences are quantitative rather than qualitative; thus interpretation is sometimes difficult. It should be emphasized that these criteria are most useful in the early phases of the disease processes. Drachman *et al.*[2] have pointed out that the histologic end-stage pictures in muscle are quite similar for spinal atrophies and for MDs.

CLASSIFICATION AND GENETICS

At present there is no universally accepted classification of MDs, but a widely accepted system which we find clinically useful is presented in Table 2. If the various types of MDs are regrouped according to pattern of genetic transmission, several clinically useful generalizations, listed in Table 3, can be made which may help the clinician both in diagnosis and in genetic counseling. Schematic representa-

TABLE 1

HISTOLOGIC AND ULTRASTRUCTURAL ALTERATIONS IN PRIMARY MYOPATHIES AND NEUROGENIC ATROPHIES

Alteration	Primary Myopathy	Neurogenic Atrophy
Histologic Changes		
1. Random variation in fiber size	+++	+
2. Fiber degeneration	++	++
3. Attempted regeneration	++	±
4. Endomysial fibrosis	+++	+
5. Fatty infiltration	++	+
6. Ringed fibers	+	±
7. Fiber splitting	++	±
8. Phagocytosis	++	±
9. Central nuclei	+++	+++
10. Fascicular atrophy	−	+++
11. Target fibers	−	++
Ultrastructural Changes		
1. Central nuclei	+	+
2. Myofibril degeneration	++	+
3. Z band irregularities	++	±
4. Dilated subsarcolemmal sacs of endoplasmic reticulum	+	±
5. Mitochondrial aggregates	+	+
6. Mitochondrial abnormalities	+	+

TABLE 2

CLASSIFICATION OF THE MUSCULAR DYSTROPHIES*

Type	Common Name	Inheritance
1. I	Facioscapulohumeral	Autosomal dominant
2. II	Limb-Girdle	Autosomal recessive
3. IIIa	Duchenne's pseudohypertrophic, rapidly progressive	X-linked recessive
IIIb	Becker's pseudohypertrophic, slowly progressive	X-linked recessive
4.	Ocular	Autosomal dominant
5.	Oculopharyngeal	Autosomal dominant
6.	Distal	Autosomal dominant
7a.	Benign congenital (Batten-Turner type)	Autosomal recessive (?)
7b.	Severe congenital (DeLange type)	Autosomal recessive (?)
8.	Unclassified, rare types:	
	a. dystrophia musculorum retrahens	Autosomal dominant
	b. familial MD with gonadal dysplasia	?
	c. other	?

* Modified from: Walton, J. N. Ann. Hum. Genet., 20:1, 1955; Chung, C. S., and Morton, N. E. Amer. J. Hum. Genet., 11:339, 1959; and Moser, H., Wiesmann, U., Richterich, R., and Rossi, E. Schweiz. Med. Wschr., 94:1610, 1964.

TABLE 3

SELECTED CHARACTERISTICS OF VARIOUS TYPES OF INHERITANCE

A. Autosomal
 1. Dominant
 a. Only one parent carries the mutant gene
 b. Several generations are affected
 c. 50 per cent of offspring are affected
 d. Occurs with equal frequency in both sexes
 2. Recessive
 a. Heterozygous gene-carriers exist in many generations
 b. Both parents are probably heterozygous carriers (both parental gametes carry the mutant gene)
 c. 25 per cent of individuals in one sibship only* are affected
 d. Occurs with equal frequency in both sexes

B. X-linked (carried on the X chromosome)
 1. Recessive
 a. No male-to-male transmission
 b. May have female heterozygous carriers
 1) 50 per cent of such females' daughters are carriers
 2) 50 per cent of such females' sons are affected
 c. Only homozygous females and "females" with one X chromosome are severely affected†

* Except in the presence of a high mutant gene frequency in "normal" population or multiple consanguinity.
† Exceptions explained by Lyon's hypothesis.

TRANSMISSION PATTERN OF AUTOSOMAL GENES

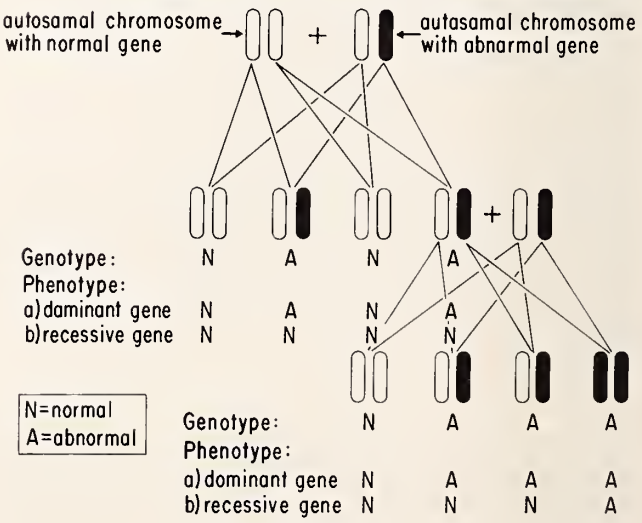


Figure 1

tions of those patterns of genetic transmission are shown in Figures 1 and 2.

SPECIAL STUDIES

In general, laboratory studies are of limited value in distinguishing one type of dystrophy from another.

The EMG reveals a myopathic pattern in all instances, though there may be minor quantitative differences.

Serum enzyme levels may be normal or increased, depending not only on the rapidity with which muscle tissue is destroyed, but probably also upon the degree of involvement of the muscle membrane. Gross elevations of serum enzymes are, however, more characteristic of some types of dystrophy (Types IIIa, IIIb and benign congenital) than of others.

Likewise, muscle biopsy reveals only quantitative differences between the various types of MD. Both the type of dystrophy and the stage of disease influence the amount of fibro-fatty replacement of muscle tissue, the degree of peri- and endomysial fibrosis, and the relative amounts of degeneration and regeneration. Muscle biopsy is, therefore, unreliable as a means of differentiating the various types of dystrophy.

CLINICAL FINDINGS

In order to separate the various types of dystrophy, then, one must rely on the clinical findings and the patient's family history to a considerable extent. The natural history and clinical characteristics of each type will be outlined in table form (see Tables 4 through 13).

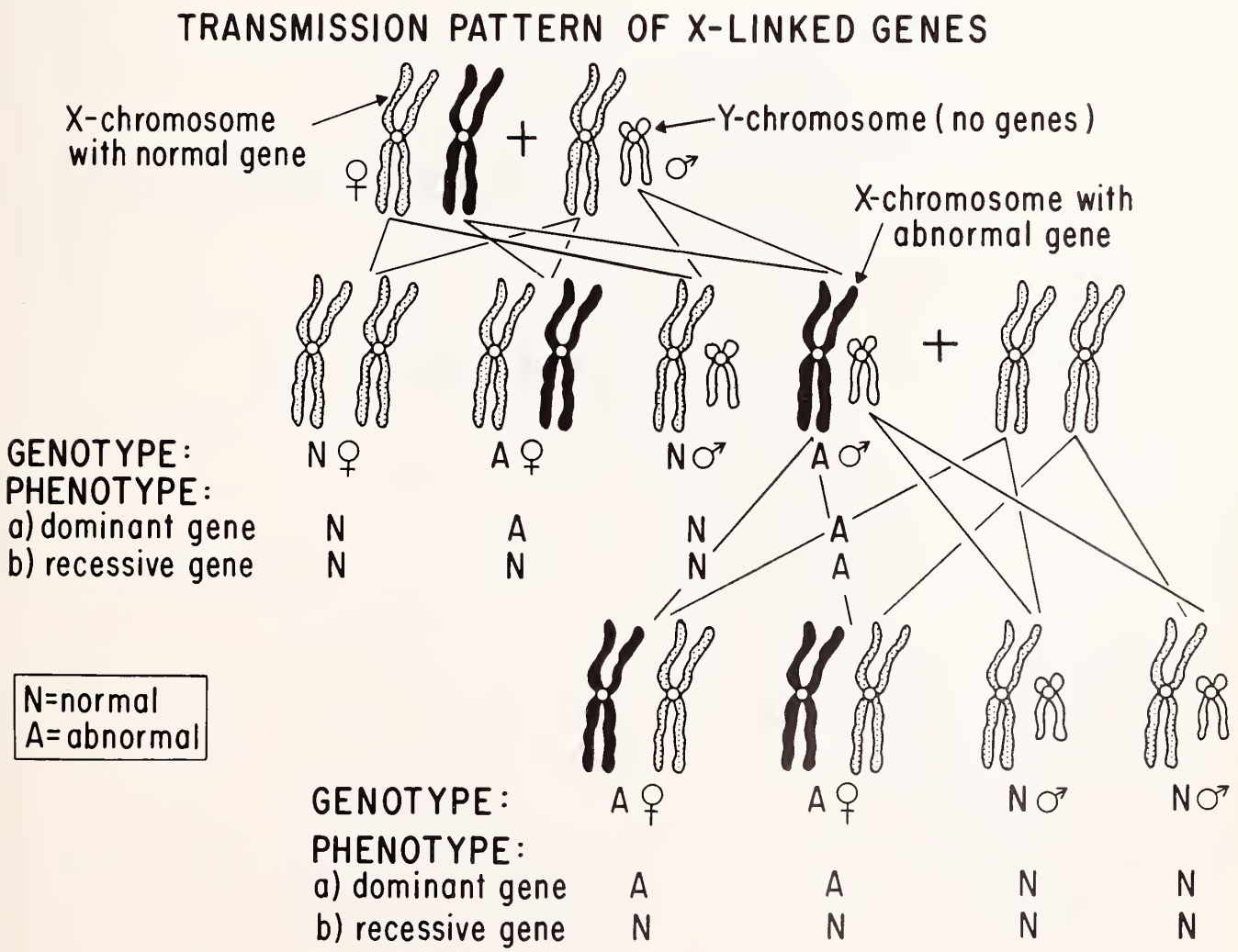


Figure 2

TABLE 4

TYPE I, FACIOSCAPULOHUMERAL MUSCULAR DYSTROPHY

A. Inheritance: Autosomal dominant and spontaneous mutation.
B. Incidence: $4/10^6$ births or 2 living cases per 10^6 living persons. (We presently are following four definite and two possible cases.)
C. Onset: At any age between early childhood and late adulthood; it may be congenital.
D. Progression: Insidious, over a period of two or three decades or longer, with intermittent periods of apparent arrest.
E. Clinical Findings:
 1. Weakness begins in facial and neck muscles; the extraocular muscles are spared. Later, it spreads to involve shoulder and pelvic girdles.
 2. Patients remain ambulatory and able to squat even at advanced stages of the disease.
 3. Extreme degrees of lumbar lordosis occur.
 4. Pseudohypertrophy, contractures and skeletal deformities are uncommon.
 5. Serum enzyme levels are normal or slightly elevated.
 6. Abortive (mildly affected) cases are common. (These may be the same as the "restricted" form of MD.)

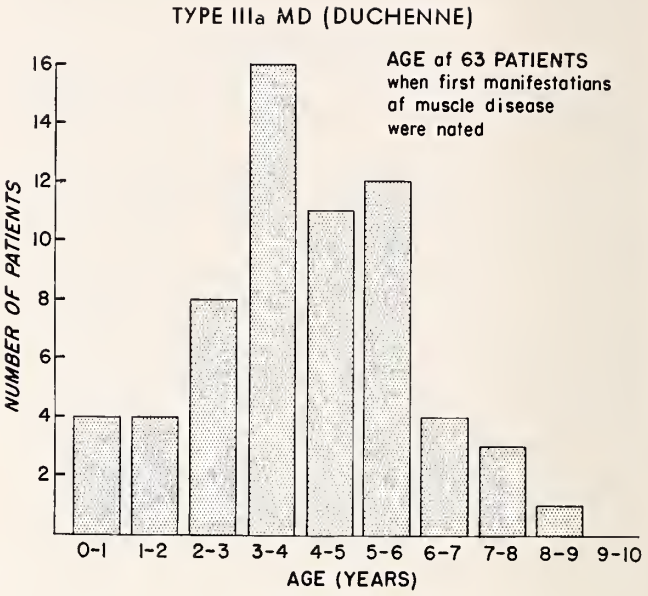


Figure 3.

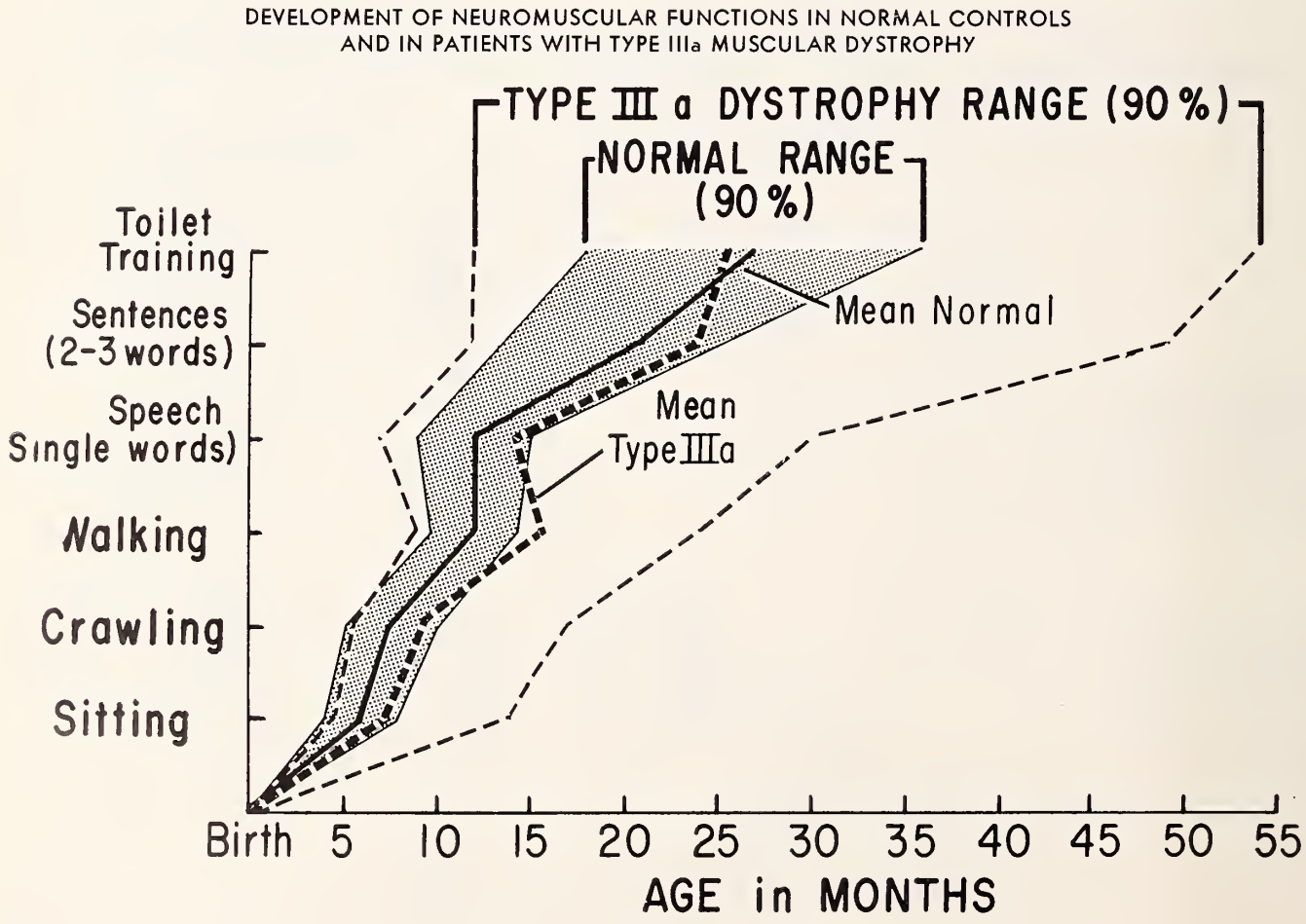


Figure 4

TABLE 5

TYPE II, LIMB-GIRDLE MUSCULAR DYSTROPHY

A. Inheritance: Autosomal recessive and spontaneous mutations.

B. Incidence: $38/10^6$ births, or 12 living cases/10^6 living persons. (We have seen five probable and four possible cases in the past eight years.)

C. Onset: Usually in the second or third decade of life; rarely earlier or later.

D. Progression: Variable; life expectancy is somewhat shortened.

E. Clinical Findings:

1. Weakness begins in either shoulder or pelvic girdle or in both coincidentally. (If the onset is in only one compartment, the other is usually involved after several months or years.)
2. Patients remain ambulatory for 20 or more years after onset.
3. Contractures and skeletal deformities are frequent.
4. Pseudohypertrophy is infrequent, but may occur.
5. Serum enzyme levels are usually normal, but may be highly elevated.
6. Abortive cases are uncommon.

TABLE 6

TYPE IIIa, DUCHENNE'S PSEUDOHYPERTROPHIC MUSCULAR DYSTROPHY

A. Inheritance: X-linked recessive and spontaneous mutations. (Autosomal recessive transmission has been postulated in rare instances, but is not generally accepted; such cases may represent phenocopies.*)

1. This disease affects males predominantly. Affected females are very rare; several of them have been shown to be sex-chromatin negative, which is suggestive of an XO (Turner's syndrome) or a XY (testicular feminization syndrome) chromosomal complement.
2. Type IIIa MD is transmitted by female carriers in many families. In rare instances such carriers themselves show minor evidence of muscular weakness; more often, the carrier state is detectable only by laboratory tests such as muscle biopsy and serum enzyme determination.
3. Sporadic cases are frequent. Of 104 cases which we are presently following, 60 families show single occurrences of the disease. An additional 24 families account for our other 44 cases, and for 32 more cases which we have not seen. In the 60 sporadic occurrences, it is estimated that 20 (one third) of the mothers are actually carriers, and each affected child of those mothers is the first such case to appear in the family.

B. Incidence: $279/10^6$ male births, or 66 living patients per 10^6 living males. (Type IIIa is the commonest type of muscular dystrophy.)

C. Onset: Laboratory indications of disease (elevated enzyme levels, abnormal EMG and abnormal muscle histology) are present at birth. Clinical signs appear sometimes in infancy, sometimes later, but always by the early school years (Figure 3).

D. Progression: Rapid and relentless. Death from inanition and/or cardiopulmonary disease usually occurs between 15 and 20 years of age.

E. Clinical Findings:

1. Generalized delay in psychomotor development is common, and may represent the first clinical symptoms (Figure 4).
2. Weakness begins in the pelvic girdle and later ascends to involve the shoulder girdle. The facial muscles are spared.
3. Generalized hypotonia may be present at an early age.
4. Inability to squat is an early sign.
5. Patients are seldom ambulatory after 12 years of age (Figure 5).
6. Pseudohypertrophy of the calves occurs in almost every case. Pseudohypertrophy of other muscles is rare.
7. Contractures are prominent and extensive. (Heelcords are affected early in the disease. Contractures of hamstrings, hip flexors, biceps brachii, pronators and supinators, etc. follow later.)
8. Skeletal deformities (especially of the spine) are frequent in later stages of the disease.
9. Myocardial involvement is common.
10. Mental retardation is frequent.
11. Serum enzyme levels are grossly elevated during the first decade of life, but tend to decrease after 12 years of age.
12. No abortive cases except, rarely, in heterozygous females.

* Goldschmidt[3] defines "phenocopy" as an alteration of phenotypic manifestation so as to mimic the effect of another gene. McKusick[4] uses "genocopy" in referring to the same phenomenon.

PROGRESSION OF TYPE IIIa MUSCULAR DYSTROPHY

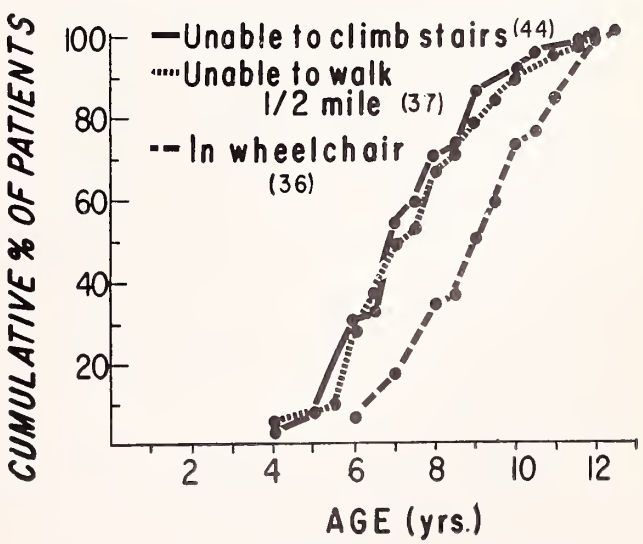


Figure 5

TABLE 7

TYPE IIIb, BECKER'S PSEUDOHYPERTROPHIC MUSCULAR DYSTROPHY

A. Inheritance: X-linked recessive and spontaneous mutations (see under IIIa). In the absence of a clear-cut family history, it may be impossible to differentiate clinically between types II and IIIb.

B. Incidence: About one-tenth as frequent as Type IIIa muscular dystrophy. Very few cases have been reported in this country.[5] (We have seen eight definite and four possible cases.)

C. Onset: First to third decade of life.

D. Progression: Essentially a slow-motion copy of Type IIIa. Life expectancy is somewhat shortened.

E. Clinical Findings:

1. Most patients are ambulatory beyond 30 years of age.
2. The distribution of muscular weakness and other essential clinical findings are much like those seen in Type IIIa, although they differ in rate of progression, age at onset and life expectancy.
3. Serum enzymes are highly elevated, decreasing at a much slower pace than in Type IIIa.
4. Cases intermediate between Types IIIa and IIIb are very rare and deserve special study.

TABLE 8

TYPES IV-V, OCULAR AND OCULOPHARYNGEAL MUSCULAR DYSTROPHY*

A. Inheritance: Autosomal dominant and spontaneous mutations.

B. Incidence: Rare, but the exact incidence is unknown. Early cases are frequently diagnosed as Moebius syndrome or as other forms of external ophthalmoplegia due to nuclear disease. (We have seen two definite and two possible cases. Three of those probably fall under the oculopharyngeal form, and one under the ocular form.)

C. Onset:

1. Ocular: Usually in the first three decades of life; occasionally later.
2. Oculopharyngeal: Usually in middle or old age; rarely earlier.

D. Progression: Variable; generally rather slow, but cases with pharyngeal involvement may progress somewhat more rapidly. Life expectancy usually is not affected.

E. Clinical Findings:

1. Ocular: Variable pattern of involvement; it may present as simple ptosis due to nonprogressive levator palpebrae weakness, or it may progress to total external ophthalmoplegia, with generalized descending involvement in later years.
2. Oculopharyngeal: Pronounced involvement of pharyngolaryngeal and masticatory muscles, in addition to involvement of ocular muscles. Rapidly descending involvement of extremity musculature may follow (Figure 6).
3. Both: There is a possible association with retinitis pigmentosa or other retinal pigmentary degeneration. Serum enzyme levels are normal or slightly elevated.

* Other investigators break the ocular muscular dystrophies into various subgroups.

OCULOPHARYNGEAL MUSCULAR DYSTROPHY

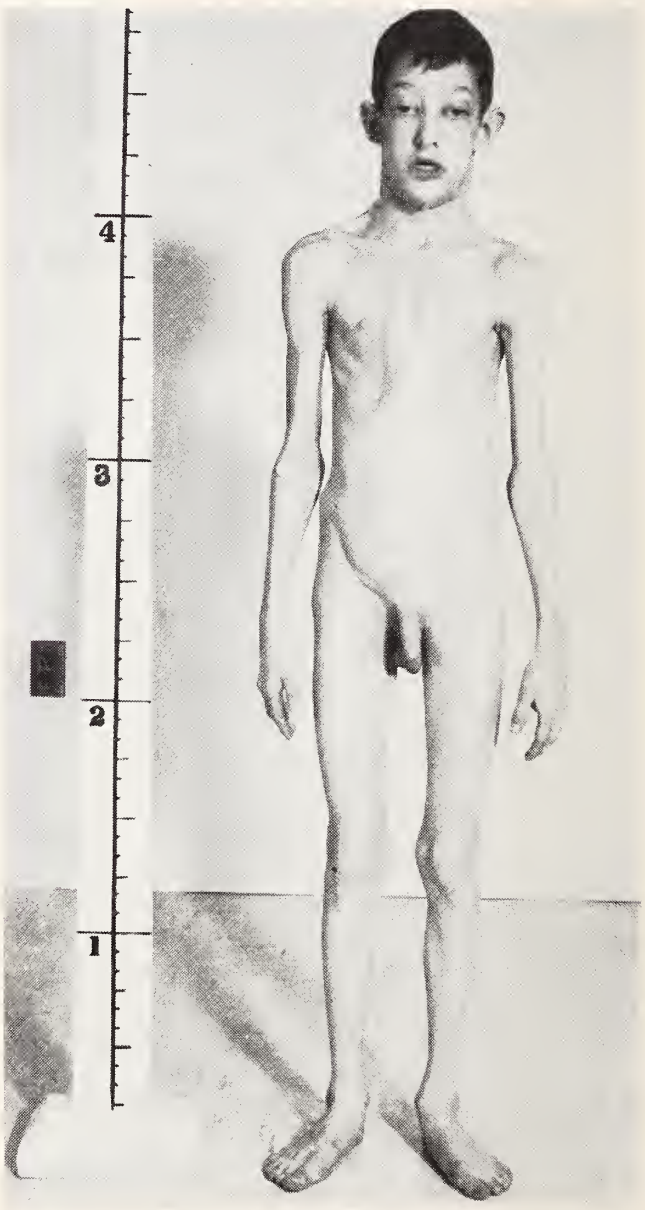


Figure 6. Oculopharyngeal Muscular Dystrophy. External ophthalmoplegia and involvement of facio-oropharyngeal muscles have been present since early infancy. Weakness in upper extremities appeared at the age of 16. Proband is of hypoplastic short stature, has normal intelligence, and shows delayed sexual maturation.

TABLE 9

TYPE VI, DISTAL MUSCULAR DYSTROPHY

A. Inheritance: Autosomal dominant and spontaneous mutation.

B. Incidence: Very rare. (We have no proved case of this type in our material.)

C. Onset: Generally between the fourth and the sixth decades of life; rarely in childhood.

D. Progression: Very slow.

E. Clinical Findings:

1. Weakness begins in the distal muscles of the upper and lower extremities.
2. This form of muscular dystrophy has seldom been described in the United States. Diseases of the neuromuscular system which present with primarily distal weakness and atrophy are expected to reveal neurologic pathology, rather than primary muscle disease.
3. Serum enzyme levels are not known.

TABLE 10

TYPE VIIa, BENIGN CONGENITAL MUSCULAR DYSTROPHY (BATTEN-TURNER TYPE)

A. Inheritance: Autosomal recessive and spontaneous mutation.

B. Incidence: Rare. The exact incidence is not known. Some cases of benign congenital hypotonia are later shown to belong in this category. (We have seen three proved and one possible cases.)

C. Onset: Presumably prenatal.

D. Progression: None; the weakness usually remains stationary, but improvement of muscle function may be possible.

E. Clinical Findings:

1. Mild to moderate muscular hypotonia is present at birth, leading to no delay, or only a slight delay, in motor development.
2. Mild to moderate weakness in neck flexors and pelvic girdle.
3. No pseudohypertrophy or contractures.
4. Serum enzyme levels are markedly elevated.
5. Affected individuals are within or slightly below the low-normal range of physical fitness and performance.

TABLE 11

TYPE VIIb, SEVERE CONGENITAL MUSCULAR DYSTROPHY (DELANGE TYPE)

A. Inheritance: Autosomal recessive and spontaneous mutations.

B. Incidence: Rare. It is possible that more cases could be identified if every case of Oppenheim's syndrome or amyotonia congenita were studied adequately. (We have seen four definite cases.)

C. Onset: Prenatal.

D. Progression: Essentially none in postnatal life. Minimal improvement is possible. Life expectancy is severely reduced, less than half of the affected persons surviving the first year of life.

E. Clinical Findings:

1. Severe generalized muscular hypotonia and weakness are present at birth.
2. Muscle mass is greatly reduced.
3. Motor development is delayed and greatly limited.
4. Few affected persons are ever able to walk.
5. No pseudohypertrophy.
6. Severe contractures may develop. In cases in which contractures developed in utero, the patient may be born with arthrogryposis multiplex congenita (Figure 7).
7. Serum enzyme levels are normal or slightly elevated.

TABLE 12

RARE TYPES OF MUSCULAR DYSTROPHY

A. Inheritance: Variable.

B. Incidence: Very rare. (We have six cases of presently unclassified types, one of which probably represents dystrophia musculorum retrahens.)

C. Onset: Variable.

D. Progression: Variable.

E. Clinical Findings:

1. This diverse group of unclassified, extremely rare entities consists of cases with unusual findings that fit none of the recognized types of MD.
2. Dystrophic changes in muscle are essential for diagnosis.

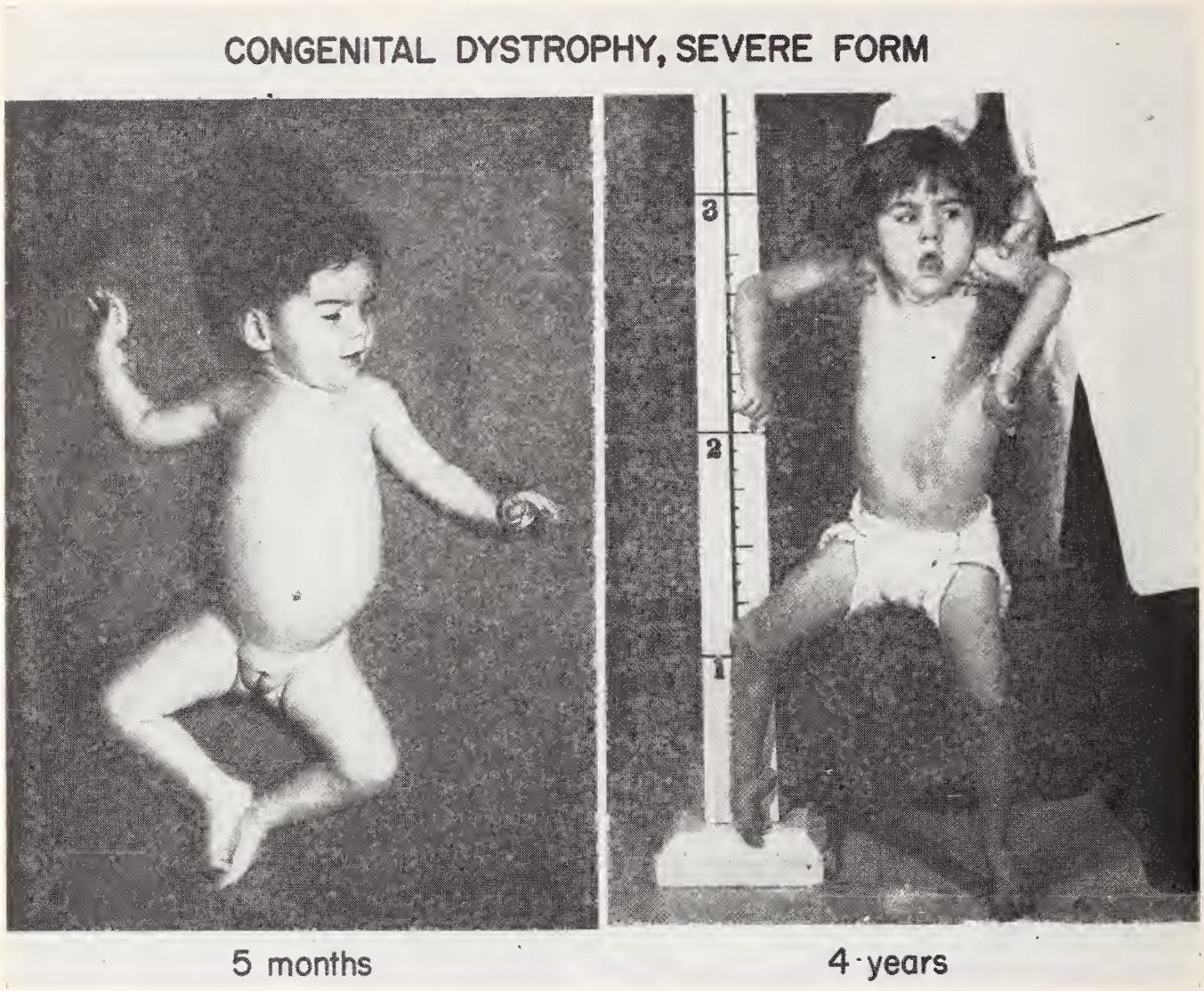


Figure 7. Severe Congenital Muscular Dystrophy. Proband was born with severe hypotonia and generalized muscular weakness. She has never been able to stand or walk. At 7 years, she is still unable to sit unsupported. Contractures are present in knee, hip, elbow flexors, and heel cords. Laboratory findings confirmed the diagnosis of muscular dystrophy.

TABLE 13

MYOTONIC DYSTROPHY (STEINERT'S DISEASE)

(For didactic reasons, it is necessary to include a brief description of myotonic dystrophy. Although it has certain similarities to the "pure" dystrophies, most authors feel it belongs to another group of myopathies, the myotonias. These also include myotonia congenita, or Thomsen's disease; paramyotonia, or Eulenburg's disease; and adynamia episodica hereditaria, or Gamstorp's disease.)

A. Inheritance: Autosomal dominant and spontaneous mutations.

B. Incidence: May be as high as one in 3,000, if all abortive forms are included.

C. Onset: Generally in the second or third decade of life, but occasionally earlier, even in infancy.

D. Progression: Slow; life expectancy is somewhat reduced.

E. Clinical Findings:

1. Newborns and infants may manifest severe hypotonia; disturbance of the muscular-relaxation phase appears later.
2. Weakness appears in the facial muscles, neck flexors and distal-extremity musculature, notably in the dorsiflexors of the foot.
3. Besides the histopathologic findings common to all types of muscular dystrophy, chains of muscle nuclei and "ringbinden" may be found on muscle biopsy.
4. EMG shows prolonged insertional activity (dive-bomber effect) in addition to the findings common to all myopathies.
5. Associated findings include mental retardation, frontal baldness, cataracts, hypogenitalism, and involvement of smooth muscle and myocardium.
6. Serum enzyme levels are normal or slightly elevated.
7. Abortive cases are common.

PRINCIPLES OF TREATMENT AND MANAGEMENT

Treatment with drugs such as creatine, vitamin E, anabolic steroids, digitalis, nucleotide-nucleoside mixtures, and insulin-glucose combinations have been attempted over the years, but without success. Therapeutic experiments with coenzyme Q are currently in process. Lacking an efficacious drug treatment, our efforts must be concentrated on physiotherapy, orthopedic methods and general management.

For all stationary and slowly progressive forms of muscular dystrophy, the following therapeutic approach is justified: active and methodical physiotherapy in an attempt to strengthen the fibers which have not been irreparably damaged by the dystrophic process; prevention of contractures, or, if necessary, surgical correction of contractures; and bracing in the advanced stages of the disease. Therapeutic principles have to be modified for the rapidly progressive Type IIIa, and the treatment for it will therefore be discussed separately.

No physiotherapy is required during the preclinical and early clinical stages of Type IIIa MD, and the child's activity need not be restricted. Contractures, particularly those of the Achilles tendon, can develop even in these early stages; hence it is advisable to instruct the parents at that time so that they can help the child perform exercises designed to stretch the Achilles tendon.

During preschool or early school years, children may encounter more pronounced weakness in the proximal muscles, and at that time physiotherapy should begin. A qualified physiotherapist, under a physician's supervision, should give instructions to the parents. Swimming exercises in a heated pool are beneficial. Also the patient often becomes aware of his handicap at that time. He is unable to compete with his mates in running, jumping, climbing, etc., and his realization of all this occurs exactly at the time when competitiveness in physical activities is of great concern to boys. It is important, therefore, to help the youngster find a compensatory hobby adapted to a sedentary life, and his parents—particularly his father—should become involved.

Prevention and correction of contractures by physiotherapeutic methods are mandatory. Surgical correction of contractures should be avoided whenever possible, since postoperative immobilization may have a nefarious effect on muscle function in Type IIIa MD patients.

As weakness progresses, between the ages of 7 and 12 years, the question of when the child should resort to a wheelchair arises. Its use should be adopted gradually. When the child's weakness causes instability and frequent falling, use of a wheelchair becomes advisable at his school, but in the protected environment of his home he may still ambulate or crawl. Whether crutches can be used depends upon the strength in the shoulder girdle; some children with severe shoulder-muscle weakness may not be able to use crutches safely.

When the child has been definitely confined to the wheelchair, intensive physiotherapy in the lower extremities should be replaced by some passive movement. Development of contractures cannot be fully avoided, once that stage has been reached, and indeed a moderate degree of contractures of hamstring and iliopsoas may even contribute to his stability in the sitting position. Physiotherapy in the upper extremities should continue, adapted to the stage of disease.

The general management of the handicapped patient is of great importance. A child afflicted with Type IIIa MD should go to school as long as possible, and should be allowed to participate to the extent that he can, in curricular and extracurricular activities. Although it too often happens that teachers refuse the responsibility of keeping a dystrophic child in the classroom, such a youngster offers the teacher an excellent opportunity to instill attitudes of helpfulness toward and acceptance of the handicapped in the physically-normal pupils.

Once they are no longer ambulatory, most dystrophic patients seem to adjust well to their handicap, and many are quite happy as long as they are accepted by their schoolmates, their family and their neighbors. It is important for the parents to be made aware of this, since witnessing the slow deterioration of their child is a cause of constant anxiety for

them. The more cases of IIIa MD we see, the more we realize how great an impact the dystrophic child has on his parents and his family as a whole. It should be the obligation of the physician to mobilize all the forces in the community which can alleviate the anguish of the family.

The treating physician should also become informed about the genetics of the muscular dystrophies, so that he may be able to advise stricken families or direct them to institutions where such advise is obtainable. Genetic counseling is of particular importance for the female members of families with X-linked muscular dystrophy—i.e., Types IIIa and IIIb. Tests are now available which determine with at least fair accuracy whether a female carries the mutant gene for either of those conditions. This topic will be discussed more fully in a later report in this JOURNAL.

SUMMARY

The natural history and differential diagnosis of the muscular dystrophies have been reviewed, and the importance of genetic counseling in such cases has been emphasized. Current trends in the management of the dystrophic child also have been discussed.

ACKNOWLEDGEMENT

The authors gratefully acknowledge the assistance of Drs. W. F. McCormick, A. Afifi, and W. Mergner in the interpretation of pathological and electron microscopic findings.

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Osteodysplasia With Mental Deficiency

HOWARD V. TURNER, M.D., and
DENNIS H. KELLY, JR., M.D.
Des Moines

VAN BUCHEM, IN 1955, described the appearance of an "uncommon familial systemic disease of the skeleton" in brother and sister twins.[1] Subsequently he reported seven more cases,[2] and it would appear that although his disease shows some resemblance to other diseases of the bone, such as Camurati-Engelman disease or Albers-Schönberg disease,[3] it is a distinct clinical entity. Two of Van Buchem's patients had associated mental deficiency.

The disease seems to be a bone dysplasia characterized by thickening and sclerosis of the diathesis of tubular bones, and likewise a thickening of intramembranous bones. Rubin[4] classifies it with other diseases involving the modeling of the diathesis. Usually these diseases are associated with an elevated serum alkaline phosphatase,[5] the normal range of which is thought to be 5-13 King Armstrong units. However in Van Buchem's Case No. 3, reported in 1962, the alkaline phosphatase was within the normal range, as indicated by Harrison's PRINCIPLES OF INTERNAL MEDICINE.

Dr. Turner and Dr. Kelly are private practitioners of psychiatry and of internal medicine, respectively. The Departments of Pathology and Radiology at Iowa Methodist Hospital, Des Moines, assisted greatly in the preparation of the material presented in this case report.

CLINICAL FEATURES

The onset of the disease occurs in the pubescent period, and the incidence is greater in males. The age range of the patients when first seen clinically has been from 23 to 52 years. The patients have had no clinical complaints, despite extensive skeletal changes. A striking feature is the thick, widened chin and heavy mandible without prognathism. Characteristic symmetrical thickening of tubular bones in the

diaphyseal segments is noted. This thickening of the diaphyseal cortex takes place mainly in the endosteum, and is not attended by an increase in shaft diameter. There is no report of bowing of the femur. However, small periosteal irregularities are noted. The short tubular bones manifest essentially the same pathologic changes. The pelvic bones are of normal contour, and diffuse sclerotic processes are seen about the acetabulum. The ribs are thickened. The spinous processes of the vertebrae are thickened. The skull is strikingly involved, and an enormous thickening of the skull is a constant finding. This thickening occurs in the vault and at the base of the skull. The sella turcica, however, is normal. The clavicles are involved. As a result of the thickening of the facial and bony structures of the skull there is paralysis of the facial nerve, and there are instances of deafness and sometimes of optic atrophy. Other parts of the clinical examination are negative.

PATHOLOGY

Only one autopsy on such a patient has been reported. The vault and the base of the skull, as well as the mandible, are thickened; the foramina are narrowed. The skull shows very compact bone, without diploë. There are small excrescences on the skull, the ribs and the long bones, and fewer excrescences on the short bones and the flat bones. The cut surfaces of tubular bones show a thick, compact cortex, but the bone trabeculae are not widened.

Quite an interesting finding is that despite all of the excess bone, there seems to be a normal degree of mineralization. Normal values of calcium, phosphate and fluorine were found on chemical analysis of the bony tissue.

According to Rubin's dynamic classification of bone dysplasias, "There appears to be a rather marked distinction between Van Buchem's disease and other hyperplasias, since Van Buchem's is characterized by an elevated serum alkaline phosphatase, and exhibits other clinical differences as to lateral bowing in the thighs; no muscular weakness or clinical complaints; no tenderness on deep palpation; and apparently no limitations in walking, running and jumping."

CASE REPORT

This paper reports the spontaneous appearance of a bony dysplasia similar in all respects to Van Buchem's disease except for the absence of hyperphosphatasia and the presence of an abnormal karyotype.

Our patient was brought to examination for psychiatric and neurologic evaluation. She was said to be retarded. She had been born, in September, 1942, in an Iowa hospital, and her prenatal, natal and postnatal periods were said to have been normal and uneventful. Her childhood diseases had included only chickenpox and measles. Otherwise she had been healthy. At 11 years of age she had experienced what apparently was a cellulitis of the left ankle, requiring brief hospitalization. At 21 years of age she had had an appendectomy and sterilization procedures.

The patient was 23 when she appeared for this examination. She had been enrolled, at approximately five years of age, in the public school system of her home town. She failed the first grade. She continued through the fifth grade in the public school system in a "special" class, and thereafter she was placed in a private school for exceptional children, where she remained until she was 17 years of age. Subsequently she was transferred to another similar school, where she remained until she was 18. She received further training at the Iowa State Rehabilitation Center in 1962, and then secured a job in private industry, but her employment was subsidized by her family.

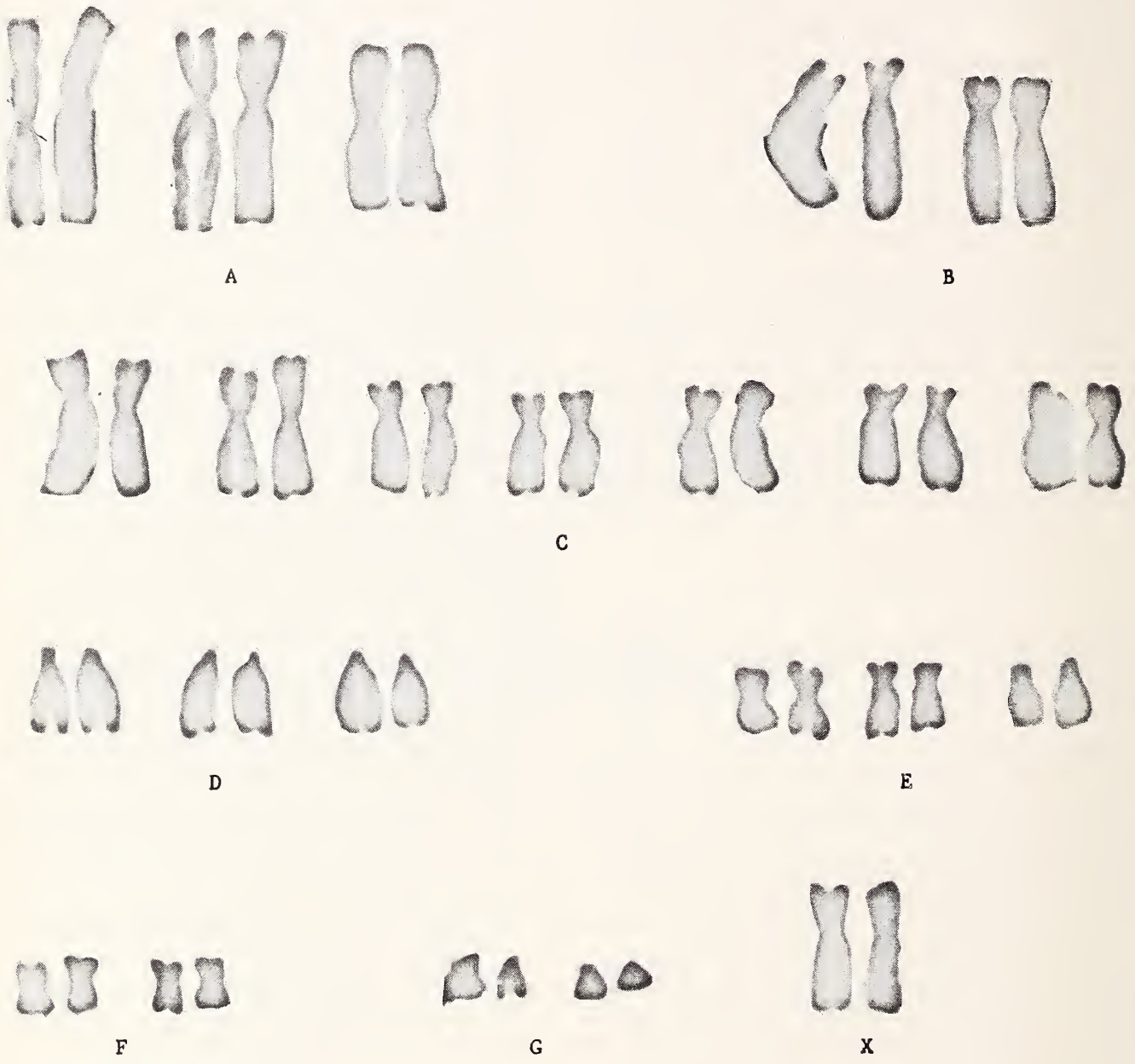
Psychological examinations: The Wechsler Bellevue Intelligence Scale, Form I, revealed her full-scale IQ as 63, and it seemed that this intelligence quotient represented a genuine, fairly serious mental retardation, not secondary to emotional disturbance. Other psychological tests revealed some evidence of organic brain dysfunction, as well as marked emotional maladjustment. She appeared impulsive, with strong emotional dependency needs and instability.

The patient appeared to be normally developed physically. Her height was 5′ 6″, and she weighed approximately 135 lbs. Her muscular development was good, and the tone was ex-

CHROMOSOME ANALYSIS

Apparent Sex: Female
Tissue Cultured: Leukocytes

Modal Chromosome Count: 46



INTERPRETATION: 46/XX

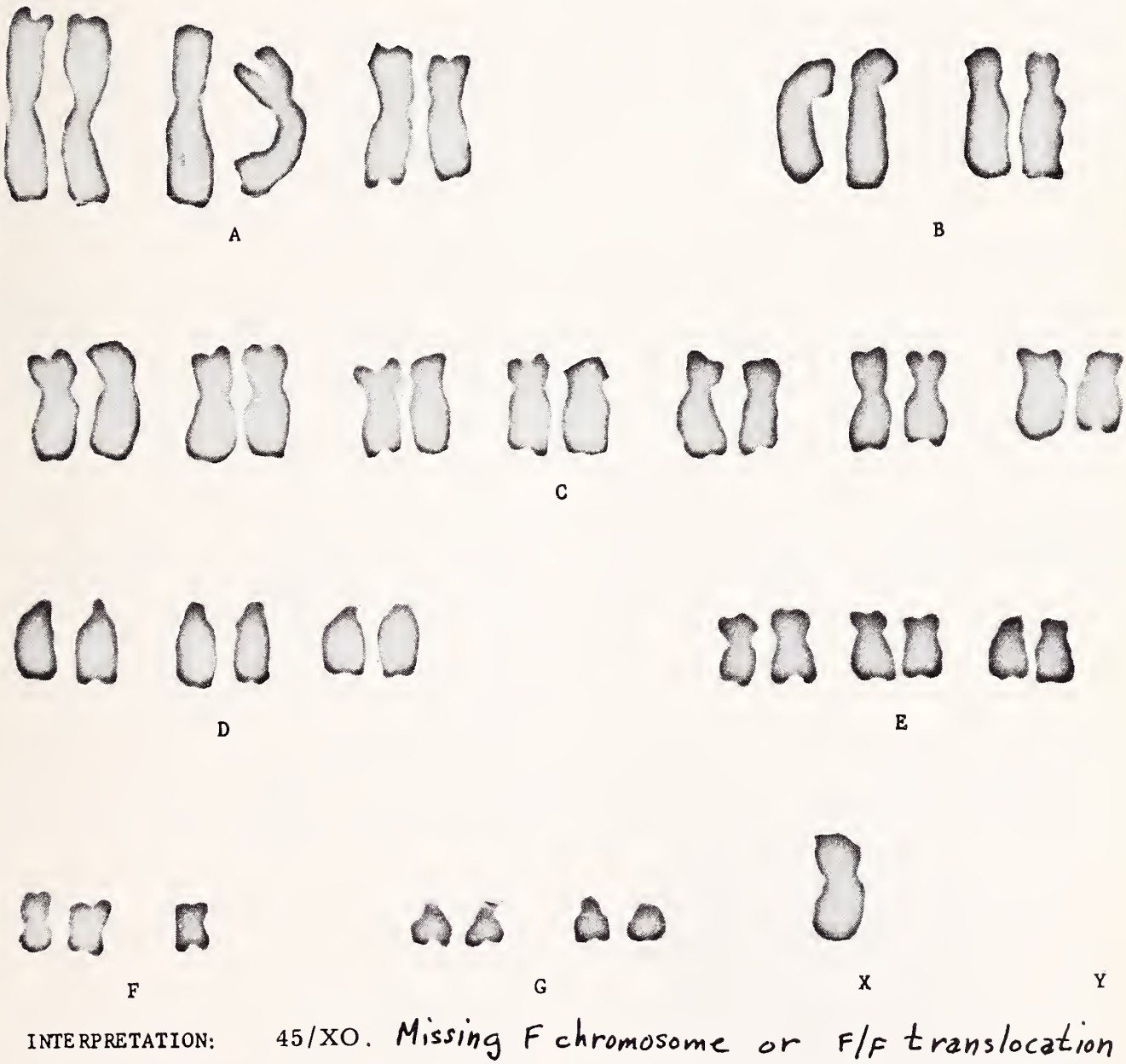
Figure 1. Chromosome analysis indicating one line of chromosomes 46/XX.

cellent. Her coordination was good, and she was capable of performing all usual physical activities without difficulty. She led an active social life, including dancing. There were no abnormalities in her gait, and no abnormalities in her use of her upper extremities. The secondary sexual characteristics appeared normal; the breasts were well developed and not widely spaced; and the pubic hair and other hair on the body was normally distributed. The external sexual characteristics were normal, as was the pelvic examination. The mandible was somewhat enlarged. The external contours and configurations of the head were not remarkable. The ears were set at a normal level, and there was no webbing of the neck.

CHROMOSOME ANALYSIS

Apparent Sex: Female
Tissue Cultured: Leukocytes

Modal Chromosome Count: 45



INTERPRETATION: 45/XO. Missing F chromosome or F/F translocation

Figure 2. Chromosome analysis indicating 45/XO, with a missing or translocated F chromosome.

The patient exhibited no neurologic deficits, there was no discomfort over the long bones on deep pressure, coordination tests were performed satisfactorily and a fundoscopic examination was within normal limits. There were no hypesthesias, no anesthesias and no paresis. The patient did not complain of any physical disability, except for some mild pain in the lumbar area of her back. The function of her back was not limited, and her physical distress was rather transient and tended to disappear with rest.

Laboratory tests were within normal limits. The peripheral blood smear showed that the erythrocytes were normochromic and normocytic, with no abnormal leukocytes, and the platelets were numerous. A cervical smear revealed precornified and cornified squamous

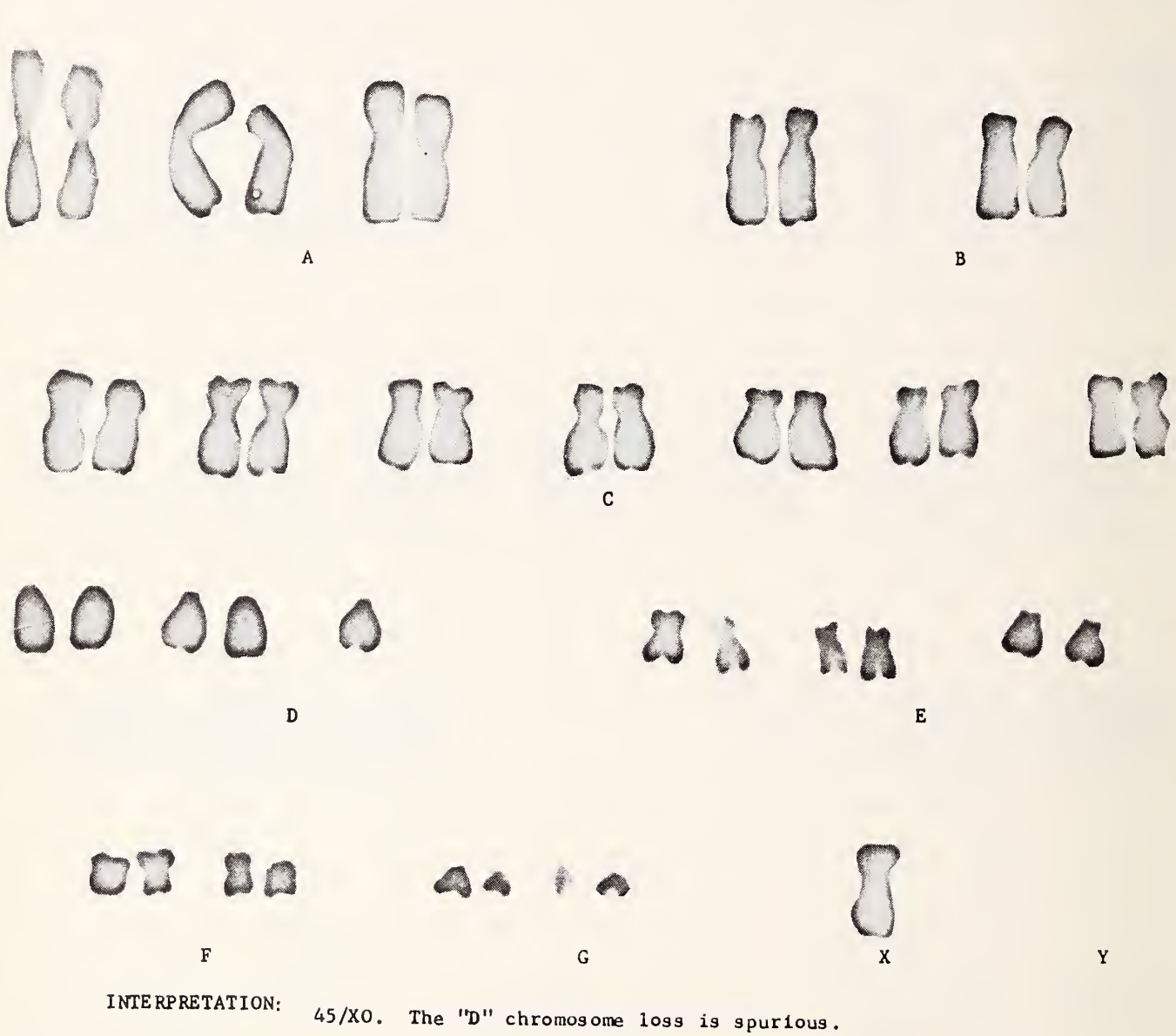


Figure 3. Chromosome analysis indicating 45/XO, with the D-chromosome loss spurious.

epithelial cells. Electromyography was reported negative for disease of the lower motor neuron. Serum protein electrophoresis was normal. The total albumin protein was 51.3 per cent, and the globulins were: alpha[1] 2.9, alpha[2] 9.5, beta 12.1, and gamma 24.2 per cent. The albumin: globulin ratio was 1.1:1. Electroencephalographic examination was interpreted only as a borderline specific record without focal or lateralizing features. The serum alkaline phosphatase was reported as 1.5 Bessy-Lowry-Beck units; the calcium phosphate as 9.5 mg. per cent; and the inorganic phosphate as 3.9 mg. per cent.

X-ray examination of the skull showed extremely dense, thick bone, involving both tables, the base of the skull and the mandible. Cervical vertebrae were also involved, and the impression was that of a hyperostosis of a benign type. The ribs were involved by the same hyperplastic process. The dorsal vertebrae and the clavicles were involved to a lesser extent. The lumbosacral spine showed sclerotic bone around the pedicles and the pos-

terior arches of the lumbar vertebrae. Sclerotic changes were also seen in the humerus and the femur. These changes involved the diaphysis of the bone, and the epiphysis of the bone was unchanged. The bones were not enlarged, but the marrow cavities were markedly encroached upon.

Buccal smears were made, and 13 per cent of the buccal epithelial cells contained sex chromosome bodies. The patient was not on steroid drugs, and that finding represented a significant diminution for a phenotypic female.

Karyotyping of the patient was undertaken, and the peripheral blood leukocytes were grown and "harvested" at the metaphase in the usual fashion. Three separate populations of chromosomes were identified. There were the usual 46 XX chromosomes. In addition, there was a group of 45 XO chromosomes. And third, there was a combination of chromosomes characterized by the loss of an X chromosome and the loss or translocation of an F chromosome.

As noted in Van Buchem's original paper, the disease may be caused by an autosomal recessive defect. The abnormality of the F chromosome does not appear to have been previously described. In this instance there was a loss or translocation of that chromosome. Its association with the clinical syndrome simulating Van Buchem's disease is of interest, and may provide some evidence as to the etiology of these disorders. The sex-chromosome abnormality is of interest in relation to the patient's mental retardation. According to Thompson,[6] the commonest of the XX/XO chromosome genotypes are classified as Turner's syndrome. These patients are usually short in stature and may exhibit webbing of the neck, low-set ears and a mature facial appearance. The chest is wide, with broadly-spaced nipples; the breasts are poorly developed; the external genitalia are juvenile; and the patients usually have female internal sexual organs. Edema of the extremities, coarctation of the aorta and mental deficiency further characterize the syndrome. As was noted, our patient exhibited quite a normal external development, with none of the usual characteristics associated with Turner's syndrome, except for a fairly severe mental deficiency.

So far as can be ascertained from the literature, no previous description of XX/XO mosaicism has been described in association with the absence or translocation of the F chromosome.

In view of the possible familial characteristics of this disease, the genealogy of the patient was investigated. No relationship to the isolated European or American groups was indicated. The patient's paternal great grandparents are both deceased. They are, however known to have lived long lives, the great-grandmother dying at 89 or 90 years of age. Of that generation there were three children, one of whom became our patient's grandfather. That grandfather ultimately died of heart disease, and his wife, the patient's grandmother, died of carcinoma of the lung. The grandmother, however, appears to have had two pregnancies, one of which was abortive and the other produced the patient's father. The father, a naval flight instructor, died at the age of 24, of poliomyelitis.



Figure 4. X-ray of the skull, anteroposterior view, illustrating the massive overgrowth of bony tissue. August, 1967.



Figure 5. X-ray of the skull, lateral view, indicating massive overgrowth of bony tissue in mandible and skull, but illustrative of the normal sella turcica. August, 1967.

Of the patient's maternal family, the great grandparents are not known. The grandparents had a family of three children—two older boys and a daughter who became our patient's mother. The older children in that family appear to have had families of their own consisting of three and two children, respectively, and there is no evidence of a pathology of a familial type.

Our patient, therefore, is a chromosomal mosaic. That is, she is an individual who has at least two lines of cells with different karyotypes—in this case three cell lines. Mosaicism, of course, occurs as the result of a post-fertilization event. There are several possible causes. From the family history just reported, the possibility of a "defect" in the parental line is suggested by the aborted pregnancy. Other than that, no abnormalities appeared in the patient's genealogy.



Figure 6. X-ray of left humerus and left chest, indicating the encroachment upon the bone-marrow spaces and the thickened cortex. August, 1967.

SUMMARY

This case has been reported as an instance of a rare systemic bone disease similar to Van Buchem's disease, but without the hyperphosphatasia. Karyotyping indicated that the patient had an autosomal abnormality as well as an abnormality of the sex chromosomes. These findings, along with others which may be reported in the future, may serve to correlate chromosomal abnormalities with these osteodysplastic diseases.

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An Evaluation of Gastric Resections for Duodenal Ulcer

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THE RECENT REPORTS in the surgical literature regarding vagotomy and distal gastric resection for the treatment of peptic ulcer prompted us to evaluate the gastric resections done by our surgical group for duodenal ulcer. Four surgeons performed the gastrectomies, and we have compared our results with those of surgeons who have employed the newer methods of treatment.

METHODS

All of our patients who underwent surgery for duodenal, combined gastric and duodenal, or stomal ulcer during the 12-year period from 1951 to 1963 were included. Those with gastric and malignant ulcers were excluded. By choosing that particular 12-year period, we could review patients on whom, with only rare exceptions, we had conducted at least a three-year follow-up.

The records of all patients were studied, together with follow-up reports obtained either through questionnaires completed by the patients or through exchanges of letters with them or their family physicians.

MATERIAL

There were 165 males and 51 females in the study. During the 12-year period, 216 gastric resections were done. The ages of the patients varied between 18 and 81 (Table 1).

TABLE 1

AGE DISTRIBUTION OF PATIENTS

Age Range	Number	Per Cent
19 yrs.	1	0.5
20-29	3	1.4
30-39	24	11.1
40-49	50	23.1
50-59	48	22.2
60-69	61	28.2
70-79	23	10.6
80-89	6	2.8

The indications for surgery are shown in Table 2. Many patients had two or more in-

TABLE 2

PRINCIPAL INDICATIONS FOR SURGERY

Intractable pain	77
(Previous perforation in 14 cases)	
Acute Hemorrhage	52
Obstruction	38
Perforation	11
Chronic hemorrhage	33
Stomal ulcer	5

dications, but only one indication (the principal one) is listed, per patient.

The criteria for emergency surgery in cases of massive bleeding were: (1) hemoglobin less than 8 Gm. per cent; (2) shock; (3) hemorrhage of 1,500 cc. or more in 24 hours. Other indications were intractability to medical management, obstruction, perforation or previous perforation, stomal ulcer and chronic bleeding.

Massive hemorrhage was the indication in 52 of the patients, and obstruction in 38 of them. Eleven patients had resection for acute perforation. Seventy-eight patients were considered intractable, and 14 of those had previous perforation. One patient perforated twice, and a resection was done at the time of the second perforation. If the perforation had occurred without a previous history of duodenal ulcer, plication was done, but if a history of ulcer preceded the perforation, resection was indicated.

There were 76 Billroth I procedures, and 140 Billroth II's performed retrocolically, with a short afferent loop to the lesser curvature and a Hofmeister type of anastomosis.

COMPLICATIONS

The complications are shown in Table 3. Duodenal-stump complications occurred in five patients, three of whom died. Catheter duodenostomy has been used with increasing frequency in the closure of the difficult duodenal stump, but one patient in whom that was done died from peritonitis.

An analysis of postoperative deaths revealed that seven patients had died within 30 days following surgery. In three of those cases death had been due to duodenal-stump leak. The overall operative mortality was 3.1 per cent (Table 4).

TABLE 3

COMPLICATIONS

Second Laparotomy Necessary	
Stump leak	4
Ruptured spleen	1
Dehiscence	4
Stomal obstruction	1
Intestinal obstruction, 2° adhesion	2
Volvulus of anastomosis	1
Infection	
Wound infection	2
Sub-hepatic abscess	1
Pulmonary pneumonia	4
Electrolyte imbalance	1
Other	
Anemia	6
Kidney stone	2
Hernia	1
Gastric dilatation	1
Cerebrovascular accident	1
Pancreatitis	1

RESULTS

Two hundred six of the 216 patients were considered satisfactorily followed for a minimum of three years or until death. Thus 10 patients were lost to follow-up, and seven patients died postoperatively. The longest follow-up was 15 years, and the shortest was three years. Twenty-seven (12.5 per cent) of the 216 patients died from other causes during the follow-up period.

During the follow-up period, 11 patients (5.0 per cent) developed stomal ulcers that required another operation. Three other patients developed bleeding, probably from a marginal ulcer, and it was controlled with medical measures.

Of the 216 operations performed, six resections were done for stomal ulcers that had developed following ulcer operations done elsewhere (Table 5).

Four patients had symptoms suggesting a recurrence, but conservative treatment controlled the symptoms, and no further surgery was necessary.

Analysis of the 11 stomal ulcers (Table 6) that occurred after resections by our group revealed that the average recurrence took place within three years, though one appeared after

TABLE 4

ANALYSIS OF POSTOPERATIVE DEATHS

Patient	Age & Sex	Indication	Associated Condition	Procedure	Cause	Time
A.A.	70—M	Hemorrhage while hosp. for observation	Anemia, gangrene of sigmoid	B II	4th p.o. day pain and fever. Stump leak	5th day
S.J.	74—M	Hemorrhage and shock. Hgb. 10.2 Gm. %		B II	Poorly functioning anastomosis	30 days p.o., and 1 week after discharge, on way to hospital
W.V.	61—M	Intractable pain and obstruction	None	B II (Difficult closure)	4th day p.o. pain and fever. Died, 11th p.o. day, of stump leak	11th day
M.K.	80—M	Stomal ulcer; gastroenterostomy 1955	ASHD	B II	CVA 3rd p.o. day	
C.G.	62—M	Hemorrhage and shock. Hgb. 8.9 Gm. %	None	B II	Stump leak	9th day
J.B.	67—M	Hemorrhage	None	B II	Obstruction due to volvulus of anastomosis	20th day
F.S.	71—M	Intractable pain	Difficult duodenal closure. Used catheter. Duodenostomy	B II	Pneumonia and obstruction	17th day

TABLE 5

OPERATIONS FOR STOMAL ULCER FOLLOWING INITIAL SURGERY DONE ELSEWHERE

Patient	Age	Previous Operation	Indication	Operation	Result
E.W.	60	Gastroenterostomy '48; then gastroenterostomy for obstruction '48	Intractability	B II 3/28/'51	No diff.
W.C.	42	Gastrojejunostomy 1/'48 for acute perforation. Stomal ulcer found 11/'50 and resection done.	Stomal ulcer	B II 11/15/'51	
		Marginal ulcer 5/'53. Gastrocolic fistula 3/'55. In 1960 still tarry stools; stomal ulcer responded to conservative treatment	Stomal ulcer Fistula	Thoracic vagotomy 5/4/'53 Fistula repaired '55	
J.W.	29	Vagotomy & pyloroplasty for intractable ulcer, '59	Perforation	B I anastomosis 9/8/'61	Good
P.L.	69	Gastrojejunostomy '54. Developed marginal ulcer '62	Marginal ulcer	B I 8/'62	Poor; recurrence '64; conservative treatment
M.K.	80	Gastroenterostomy '55; Perforated ulcer '58	Perforation	B II 11/5/'58	Died
C.A.	30	Vagotomy & pyloroplasty '60	Intractability	B II 2/15/'62	Good
E.J.	76	Gastroenterostomy	Stomal ulcer	B II 9/6/'52	Good

TABLE 6

CASES OF STOMAL ULCER FOLLOWING OPERATIONS FOR DUODENAL ULCER DONE BY OUR GROUP

Patient	Age	Indication	Initial Operation	Recurrence	Surgery for Recurrence	Results
B.R.	61	Intractability	B I 8/'59	Perforation 1/'62	Gastro-enterostomy	Good
D.J.	48	Chronic hemorrhage, psychoneurotic	B II 1/'56 Ulcer couldn't be removed	(1) Stomal ulcer '57; (2) stomal ulcer '58; (3) stomal ulcer '62	Vagotomy '59 (abdominal) Hemorrhage; no surgery	Poor
F.J.	75	Recurrent hemorrhage	B II 3/14/'60	Stomal ulcer 9/'61, with bleeding	Vagotomy '61	Poor
G.H.	52	Intractability	B II 2/10/'59	Stomal ulcer	Vagotomy, thoracic, 3/29/'61	Good
E.S.	48	Massive hemorrhage; shock	B I 2/6/'62	Stomal ulcer	Vagotomy, thoracic, 4/20/'63	Good
L.M.	44	Intractability	B I 10/22/'60	Stomal ulcer with obstruction	Re-resection, vagotomy '63	Good
E.P.	52	Intractability	B II 2/4/'58	Stomal ulcer	Re-resection at Mayo Clin. '60	Fair
A.K.	43	Obstruction	B I 12/16/'60	Stomal ulcer	Abdominal vagotomy 8/12/'64	Good
J.H.	45	Intractability	B I 8/10/'61	Stomal ulcer '66	Abdominal vagotomy 8/12/'66	——
W.C.	42	Stomal ulcer after gastro-jejunostomy	B II 11/15/'51	Stomal ulcer 5/4/'53	Thoracic vagotomy 5/4/'53	Poor
J.J.	58	Hemorrhage, acute	B II 2/12/'56	Stomal ulcer with bleeding 2/17/'63	Thoracic vagotomy 8/10/'63	Good

five years. The indication for the initial surgery had been perforation in one case, bleeding in four, intractability in five and obstruction in one. Five of these patients had Billroth I operations (6.6 per cent of the B I's); seven were B II (5 per cent of the B II's). There were 76 B I's and 140 B II's in the series. In one case of stomal ulcer, it was noted at the time of gastric resection that the ulcer would be difficult to remove and it was permitted to remain *in situ*. This may account for the patient's continued ulcer symptoms, aggravated by gastrin-forming mucosa. As treatment for stomal ulcer, eight patients had vagotomies. Three had poor results. One patient had a re-resection with vagotomy; another had re-resection alone; and one had a gastroenterostomy as treatment for a perforation after a B I anastomosis. Those three had good results (Table 6).

TABLE 7

REPORTED RECURRENCES OF DUODENAL ULCER AFTER GASTRIC RESECTION WITHOUT VAGOTOMY

Authors	Year Reported	Number of Patients	Length of Follow-up (years)	Recurrent Ulcerations Number	Recurrent Ulcerations Per Cent
Pollard and associates	1952	55	5	5	9.4
Wallensten	1954	201*	up to 21	14	6.9
Moloney	1954	85	?	1	1.2
Palumbo and associates	1954	157†	1/2 to 7 1/2	6	3.8
Ordahl and associates	1955	99	4 to 5	14	14.1
Goligher and associates	1956	186	> 3	16‡	8.6
Hickinbotham	1956	105	2 to 4	10	9.5
Walters and associates	1957	449	6 to 10	16	3.6
Schirmer and Bowers	1957	172	?	5	2.9
Horsley and Barnes	1957	102	?	4	3.9
Fisher and Jordan	1958	93	2/3 to 5 1/2	11	11.8
Localio and Dwyer	1959	75	1 to 5 1/2	8	10.7
Hutchinson and Kirkluk	1960	61	> 5	6	9.8
Harkins and Nyhus	1961	351	?	17‡	4.8
Gobbel and Shoulders	1963	842	2 to 10	107‡	12.7
Totals		3,034		240	7.0

* Only male patients.
† Includes patients with marginal ulcer.
‡ Includes suspected recurrences.

Table 7 shows a collection of reported series totaling 3,034 gastric resections done for duodenal ulcer, with an average recurrence rate of 7.9 per cent, compared to our 5.1 per cent.

Table 8, a collection of series reporting results achieved with antrectomy and vagotomy shows a recurrence rate of just 0.6 per cent in 3,565 patients, and suggests that this operation would have merit. Table 9, summarizing reports on 1,920 patients who underwent vagotomy and gastric drainage, shows an average recurrence rate of 9.3 per cent.

Our series is very similar to other reported series of gastric resections for duodenal ulcer. However, the improved results from vagotomy and antrectomy suggest that this operation may be an improvement in the surgical treatment of duodenal ulcer.

TABLE 8

REPORTED RECURRENCES AFTER ANTRECTOMY AND VAGOTOMY FOR DUODENAL ULCER*

Authors	Number of Patients	Length of Follow-up (years)	Recurrent Ulcerations Number	Recurrent Ulcerations Per Cent
Edwards and associates (3)	1,073	Up to 16	7	0.6
Fallis	500	Up to 10	4	0.8
Martin	310	Up to 7 1/2	0	0.0
Smithwick	305	Up to 10	1	0.3
Crile	300	Up to 4	0	0.0
Coffey	250	Up to 9	1	0.4
Ransom	250	Up to 8	1	0.4
Moloney	200	Up to 9	0	0.0
Harkins	137	Up to 8	1	0.7
Gobbel and Shoulders	240	2 to 10	6†	2.5
Totals	3,565		21	0.6

* Table modified from Herrington.
† Includes suspected recurrences.

TABLE 9

REPORTED RECURRENCES FOLLOWING VAGOTOMY AND GASTRIC DRAINAGE FOR DUODENAL ULCER

Authors	Year Reported	Number of Patients	Length of Follow-up (years)	Recurrent Ulcerations Number	Recurrent Ulcerations Per Cent
Pollard and associates	1952	21	5	1	4.7
Brooks and Moore	1953	35*	6 to 10		14.3
Oberhelman and Dragstedt	1955	487	?	35†	7.2
Weinstein and associates	1955	58	1 to 7	6	10.3
Holt and Robinson	1955	110	> 3	3†	2.7
Hoerr	1955	145	> 5	12	8.3
Walters and associates	1957	123	5 to 10	16	13.0
Edwards and associates	1960	143	1 to 14	19	13.3
Gobbel and Shoulders	1963	312	2 to 10	60†	19.2
Weinberg	1964	486	2 to 14	22	4.5
Totals		1,920		179	9.3

* Includes patients with marginal ulcer.
† Includes suspected recurrences.

SUMMARY

A review of the gastric resections for duodenal ulcer disease done by a private Iowa surgical group has been presented. A series of 216 gastric resections and the resultant mortality, morbidity and recurrence rates have been evaluated and compared with the results reported by other physicians who have employed different methods of surgical treatment for duodenal ulcer.

REFERENCE

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Comfortable Words

(An editorial in the OTTUMWA COURIER, *January 6, 1968)*

Doctors and the high cost of staying alive have taken a drubbing in the press this season.

Unregulated fees, particularly for Medicare services, are the prime target, and we can reasonably suppose fees are high, maybe even higher than they ought to be.

Right here in Ottumwa, Iowa, however, we see a great deal of the other side of the coin.

Our physicians for one thing, don't do business in marble palaces. They keep their overhead reasonable, and they preserve somehow the dignity and expansive good will of an earlier generation.

Even more notable is the Ottumwa fraternity's genuine effort to keep the patient's costs at a supportable level. The children's clinic at Ottumwa Hospital is clear evidence of this good will.

And the parents who find themselves grousing about a flood of medical bills might for a moment reflect on the number of gratis "calls" they've made to the doctor by way of the telephone.

Antibiotics, as most everyone knows, have revolutionized medicine. They've all but eliminated the threat of once-mortal diseases. Instead of night and day bedside vigils, we now have a course of oral medicine and we're back at the job.

Medical fees are high. They may be too high. But they're paying for an enormously upgraded brand of medical care, likely worth the extra tariff.

* * *

(An excerpt from an obituary for Dr. Kenneth H. Weaver, of Union, in the CONRAD RECORD *for January 25, 1968)*

Dr. Weaver devoted his life to the service of his fellowmen. Every call was to relieve suffering. What a calling! Dr. Weaver was a kind man. He will be greatly missed.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 475

Cancer of the Cervix, Radiation and Chemotherapy, Shock

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
MRS. REBECCA FRIEDMAN, Secretary

SUMMARY OF CLINICAL FINDINGS

A 40-YEAR-OLD WOMAN was admitted to the gynecology service of University Hospitals in August. She had been well until a year earlier, when she complained of a vaginal discharge, was examined and was told she had a pelvic infection. She then had a menstrual period that lasted one month. A D&C and a cervical biopsy were done at her local hospital. The latter was reported as showing epidermoid carcinoma. She was given 10 x-ray treatments, for a 2,000 r depth dose. She then had 7,200 mg. hrs. of radium, and two months later she received 14 Co^{60} treatments, for a 6,000 r depth dose. Thereafter she was asymptomatic until two months prior to her admission to University Hospitals. Then, she had a vaginal hemorrhage, she was rechecked at her local hospital, and she was given 13 more Co^{60} treatments, for a depth dose of 3,000 r. Since that time she had complained of a vaginal discharge, but had no bleeding. However she developed low-backache and pain in the pelvis—a steady, nonremitting ache that was relieved to some extent by ASA. Her appetite had been poor recently, and she had had an 8 lb. weight loss in the past year.

Examination at the time of admission revealed a Grade II systolic murmur over the precordium. No abdominal masses were present. She did have radiation changes in the skin over the abdomen. Pelvic examination revealed a foul, gray, watery vaginal discharge. A large necrotic tumor was found across the upper third of the vagina. It contained a necrotic crater in the area of the cervix. The adnexa was hard and dense, and there was a mass in the right pelvic area extending out to and involving the posterior lateral pelvic wall. It was thought to be fixed to the sacrum. On admission her pulse was 80/min., and her temperature was 99.4°F.

Laboratory studies revealed a hemoglobin of 9.4 Gm. per cent, and a white blood cell count of 12,100/cu. mm. with 3 bands, 87 segmentals, 1 eosinophil, 4 lymphocytes and 5 monocytes. The hematocrit was 30 per cent. Sigmoidoscopy was negative. Intravenous pyelograms and a cystogram were reported as negative. Her chest x-ray and urinalysis were negative. A biopsy of the cervical area was reported as showing epidermoid carcinoma.

Six days after admission she had a small amount of vaginal bleeding. Her hemoglobin at that time was 7.3 Gm. per cent, and her hematocrit was 24 per cent. The bleeding was treated by vaginal packing, and was controlled. Three weeks after admission she was given three units of blood and was taken to the operating room for an abdominal exploration. She was found to have an extensive, nonresectable tumor involving much of the pelvic wall, especially on the right. The pelvic mass

was biopsied and again was reported as metastatic carcinoma. At that time the inferior hypogastric arteries were tied off, catheters were put into them, and she was started on a course of 5-fluorouracil (5-FU) through the catheters in a dosage of 250 mg. every 24 hrs. Six days postoperatively it was determined by x-rays that the left catheter was leaking fluid into the pelvis, and the infusion on that side was discontinued. The 5-FU infusion on the other side continued for 14 days. During that time she ran a low-grade fever between 100.5° and 101°F., but blood cultures were negative. She also complained of pain and paresthesia in her right lower extremity. Sixteen days after her operation, she was discharged from the hospital. The left irrigation catheter had been removed, and the right one had been sealed and placed subcutaneously.

She returned to the hospital as an emergency nine days later. The day before, she had had copious blood-tinged vaginal discharge, and pus was draining from the abdominal area in the region of the catheter in the right hypogastric artery. Examination revealed that she had a 1 cm. infected area around the catheter site. Pelvic examination showed that the tumor in the pelvis was softer than it had been, and it was thought that it might have decreased in size. The abdominal abscess was incised and drained, and she was started on stilbestrol, 0.5 mg. every day. Five days after that second admission, the right hypogastric catheter was removed, and a culture of the abdominal wound showed diphtheroids and Bacteroides. She was started on Chloromycetin, 500 mg. q6 hrs. Her vaginal discharge persisted, and two weeks after admission she had an episode of massive vaginal bleeding estimated at 2,000-3,000 cc. At that time her blood pressure dropped to 98/60 mm. Hg, and her pulse rate was 130/min. Pelvic examination revealed that she had multiple bleeding sites from the vaginal apex, in the region of the necrotic sloughing tumor. There was no one bleeder that could be clamped, and she was treated by vaginal packing. In addition she was given 3,000 cc. of lactate Ringer's solution; 500 cc. of 6 per cent dextran and 0.9 per cent saline; and 1,000 cc. of blood. On the following day the hemoglobin was 10.3 Gm. per cent and the hematocrit was 30 per cent. At that time it was noted that she had suprapubic distention, and two days after the episode of hemorrhage it was noted that she had bleeding from the abdominal wound where her right hypogastric-artery catheter had been removed. Her vaginal pack was oozing. Her blood pressure was 84/60 mm. Hg. The abdomen was distended, and there was a soft, firm suprapubic mass that extended up to the umbilicus. For a decreased urine output, she was given 500 cc. of 5 per cent dextrose in water; 500 cc. of 10 per cent mannitol; and 500 cc. of blood. Afterward there was an improvement in the output. Three days after her hemorrhagic episode, the hemoglobin was 11.1 Gm. per cent, and the white blood cell count was 29,050/cu. mm., with 19 bands, 80 segmentals, and 1 lymphocyte. The platelet count at that time was 80,000/cu. mm., the hematocrit was 38 per cent, and the clotting time was 12 min. On that day she had an emesis of brown liquid, had a weak pulse, and was cold and clammy. Four hours later no blood pressure or pulse was obtainable, and she was pronounced dead.

CLINICAL DISCUSSION

Dr. F. W. Stamler, Pathology: The case for discussion today is one portraying the fatal outcome of a neoplastic disease. The disease is not an unusual one. In fact the patient was one of about 10,000 women in this country who died of such neoplasms in the year 1965—in spite of the fact that there has been an intense interest in early detection and treatment of that particular malignancy. It is in that light that I should like us to consider the case. Mr. Daryll Eggers will discuss the case from the standpoint of the students.

Mr. D. Eggers, junior ward clerk: The protocol describes a lady with extensive, at least Stage III, epidermoid cancer of the cervix. We feel that she died in shock secondary to blood loss. Our diagnosis is based mainly on the fact that she had a massive vaginal hemorrhage three days before her death. At that time her blood pressure fell, her pulse rate rose, and in spite of vigorous anti-shock therapy, no real reversal of the trend was ever effected. Besides that insult, which in itself was probably sufficient to cause her kidney damage, she continued to bleed from the vagina and from the site

of the right hypogastric-artery catheter. We also believe that the patient bled internally in much the same way as she bled externally, i.e., from multiple bleeding sites in the necrotic tumor, and that her internal bleeding explained her progressive abdominal distention over the last few days of her life. In the final analysis, any chance the woman had of surviving the major episode of vaginal hemorrhage three days before her death was precluded by a continuous oozing of blood from the many vessel walls that had been invaded by tumor.

The only other diagnostic possibility we considered seriously was an uncontrolled infection, and the patient had many reasons for being infected. Her pelvis had certainly become an excellent culture medium for bacteria. She had been manipulated surgically, and an open tract had been installed to the tumor area. An abscess did, in fact, form about that tract, and it harbored at least one organism, Bacteroides, which has been said to cause fatal bacteremia. She had an elevated white blood cell count with a pronounced shift to the left, and the enigmatic soft, firm, suprapubic mass may well have been due to a pyometra. A gram-negative endotoxin could even have contributed to her state of shock. On the other hand, even two weeks after her operation, her blood cultures were negative. When she was admitted the last time, with obvious infection, she was treated surgically, and an antibiotic regimen was instituted. Afterward her fever was unremarkable, or at least there is no note about it in the protocol. So if her infectious process did become uncontrolled, it must have done so in the last few days of her life when she had a blood picture consistent with acute infection, when she had signs suggestive of a pyometra, and more importantly, we feel, when she had already lapsed into irreversible shock due to blood loss.

Dr. Stamler: Dr. William R. Anderson will discuss the case from the point of view of the gynecologist. I believe he was not personally involved in the management of this patient.

Dr. W. R. Anderson, Obstetrics and Gynecology: Mr. Eggers has adequately covered what seems likely to have been a reasonably straightforward death secondary to a radioresistant cervical carcinoma. The radioresistance of this carcinoma is one of the chief aspects of the case that should be of interest to gynecologists who treat cervical carcinoma.

I think the easiest way to dissect the protocol will be to separate it into three portions: (1) initial diagnosis, therapy and treatment; (2) the patient's initial visit to the University of Iowa Hospitals with a recurrence, and our thought processes as we tried to treat that recurrence; and then (3) a brief summary, repeating for the most part what Mr. Eggers has already said, of the terminal events.

In the first paragraph of the protocol we find the bulk of the information concerning the patient's diagnosis and therapy. The protocol is somewhat confusing, however, as to exactly how many roentgens of depth doses the patient received. When I totaled up all of the roentgens initially—the 2,000 r depth dose in 10 treatments, plus 14 Co^{60} treatments giving 6,000 r, and several months later a 3,000 r additional depth dose—I came up with a total dosage depth dose of 11,000 r to the pelvis, which certainly exceeded what most patients would tolerate. I think what probably happened was that 6,000 r was the total depth dose for the entire initial treatment—2,000 r, her terminal 14 treatments with Co^{60}, plus 7,200 mg. hrs. of local radium application to the central tumor mass. Then the 3,000 r was the treatment for recurrence. Perhaps Dr. Latourette will have more to say about that later. The depth dosage was slightly in excess of what we ordinarily give to our patients with epidermoid carcinoma of the cervix, as was the 7,200 mg. hrs. of radium reported in the protocol. There was no indication from the history that the patient had any abnormal sensitivity or any problems in tolerating that x-ray therapy.

One interesting aspect in her initial treatment was the two-month delay between the initial radium therapy and the completion of her external therapy. That has not been explained. Also, the protocol does not tell us what histologic type of tumor the patient was being treated for. We assume that it was an epidermoid carcinoma. The degree of differentiation is not given us.

The patient tolerated her initial therapy reasonably well. Her recurrence was marked by

vaginal bleeding which, on examination at her local hospital, was believed to be on the basis of recurrent tumor. We are not told whether the patient had a biopsy or not. It is extremely important, in diagnosing recurrence, to obtain a tissue diagnosis before proceeding with therapy. The patient then had 13 additional treatments of Co^{60} for a total depth dose of 3,000 r. Thereafter she had excellent palliation. At least she had no more bleeding. Yet in the last three sentences of the history are the key statements that indicate she did have a further progression of her tumor and/or a recurrence of the tumor, for she lost weight, had a steady, non-remitting low-back ache, and pain in the pelvis. That is a common symptom complex that patients manifest when they have a progression of tumor with involvement of the roots of the lumbosacral neural complex as it leaves the spinal canal.

On admission to University Hospitals, the patient had symptoms and signs of recurrence in that she had vaginal bleeding, which was treated, she had back pain, and she had weight loss. The first two paragraphs here really concern our initial evaluations of that recurrence. It is of interest that the patient did have radiation changes over the skin, but apparently they were not marked ones, since no further note is made of them. The pelvic examination yielded evidence of a large necrotic tumor that probably had a grayish-yellow membrane over it. It was exuding a foul, gray, watery vaginal discharge.

Unfortunately, that clinical appearance does not necessarily mean that the patient had recurrent epidermoid carcinoma. We have seen that same clinical appearance in a patient who had a massive pelvic radiation necrosis. One must have biopsy proof of recurrence. That was obtained, as the last sentence of the third paragraph indicates. Laboratory studies yielded the information that there was no involvement of that tumor in the genitourinary tract. There was no evidence of hydronephrosis or encroachment of the tumor on the ureters. There was no breakthrough of the tumor in the bladder on cystoscopy. A chest film revealed no evidence of metastatic disease in the chest. The biopsy was performed, and it was interpreted as recurrent epidermoid carcinoma; this despite the fact that the patient had had 7,200 mg. hrs. of radium to the central pelvis and over 9,000 r of depth-dose x-ray to the central pelvis. With that type of radiation treatment, it is unusual for us to find recurrent tumor in the central pelvis. Usually recurrent tumors are on the side walls but not in the central pelvis. This was truly a radioresistant type of epidermoid carcinoma.

We were faced, then, with recurrent or progressive epidermoid carcinoma of the cervix and repeatedly demonstrated radioresistance. Now as regards therapy. On examination it was reported that the tumor mass was fixed to the posterior lateral pelvic wall. That fixation, plus the symptom of back pain, makes one feel that a surgical attack would be inappropriate. Generally speaking, surgical attacks on recurrent carcinomas of the cervix have been unsuccessful in cases where there has been lateral side wall attachment, and therefore we do not attempt radical removal of the tumor in such cases. In order to evaluate this patient completely, laparotomy was thought advisable, so after being prepared for surgery by means of three units of whole blood, the patient was taken to the operating room. At the time of exploration it was felt that there was a large, extensive tumor that involved much of the pelvic wall, primarily on the right side. That was our reason for thinking it non-resectable. Biopsies to prove that the tumor involved the lateral pelvic wall were again positive for epidermoid carcinoma. The clinicians were left with only one other palliative and possibly therapeutic measure that could be performed, that being chemotherapy. That plan, I am sure, was instituted with the assistance of Dr. Lawton.

Two things were accomplished by the ligation of the inferior hypogastric arteries at the time of pelvic exploration. (1) The placement of catheters in the distal hypogastric arteries was undertaken for the infusion of chemotherapeutic agents. (2) By ligating the hypogastric arteries there was a possibility of decreasing the problem secondary to vaginal hemorrhage. Through the catheters, which were left in place, an antimetabolite, 5-FU, was infused into the pelvis over a 14-day period. The patient apparently tolerated the infusion reasonably well, with only a few of the side effects that one might expect.

There has been a somewhat meager use of catheters and of infusions through them, in our specialty, and the reports on a few such cases have not been glowing. There are many problems associated with the use of catheters and there are additional problems associated with the drugs. Some of them were illustrated in this patient. Apparently the left catheter came out of the artery, and the infusion was dribbling into the pelvis rather than into the vascular tree as had been intended. So it was removed. The patient also had pain and paresthesias in the lower right extremity. Most people who have done perfusions and infusions report a significant rate of neurologic disability and some irritation secondary to the drug. After 14 days, it apparently was felt that the patient had been infused enough, for the time being, and she was discharged. The right catheter was left beneath the skin, however, with the thought, I am sure, that it could be reused to repeat the infusions. The protocol says nothing specifically about how the patient tolerated the 5-FU infusion as far as her bone marrow was concerned.

When the patient was readmitted she had vaginal bleeding again—a very ominous sign as far as she was concerned. She also had pus draining from the right side, where the catheter had been buried. That was not particularly abnormal. On incision and drainage of that particular area, Bacteroides and diphtheroid organisms were found. Mr. Eggers was correct in stating that Bacteroides was not a strange organism to find in pelvic and vaginal infections. Since we have been looking for them, we have been finding an increasing number on the obstetrics and gynecology service. Any time that there is degenerative tissue and blood, there is an excellent culture medium for this anerobic non-spore-forming organism. The antibiotics of choice are tetracycline and Chloromycetin. The latter was chosen in this instance, and it was given in adequate doses. It is of interest that on examination the tumor seemed to be smaller and softer than it had been, indicating an effect as far as the chemotherapeutic agent was concerned.

As Mr. Eggers has said, the terminal event seemed to be a bleeding episode. The patient had a mammoth vaginal hemorrhage of two to three liters of blood, with a shock-like episode. On examination she did not have a single area of bleeding, but had multiple bleeding sites, precluding any surgical attempt, it was felt, to ligate specific bleeders. The only alternative was to pack the vagina, and that was accomplished. The packing at least slowed down the clinically visible evidence of hemorrhage. After packing the vagina and expanding the circulatory volume, the physicians observed that the patient began to have suprapubic distention, which I think we can interpret as the result of retroperitoneal hemorrhage. The retroperitoneal hemorrhage presented at the site where the right hypogastric-artery catheter had been removed. This was evidence of continued pelvic bleeding.

Why the patient had that hemorrhage, I think is an interesting question. I am sure there are several possible reasons. She might have had tumor invasion of various blood vessels. The hemorrhage could have been due to problems with the clotting mechanism following the use of antimetabolites. There was a depressed platelet count, even though the clotting time seemed normal. Perhaps Dr. Hoak or someone else may have comments on that. Another interesting possibility is one that Dr. Hamilton mentioned in a CPC recently—the intravascular disseminated clotting phenomenon, with the depletion of certain clotting factors. Dr. McKay, in his book on intravascular clotting, has stated that disseminated intravascular coagulation occurs in patients with a variety of metastatic carcinomas, and that the clinical syndromes can be dominated by hemorrhagic diathesis, or by shock, or by acute renal failure, or by nonbacterial thrombotic endocarditis. His mechanisms for the intravascular coagulation are predicated primarily on tumor destruction and a questionable release of tissue thromboplastins or perhaps proteolytic enzymes.

For whatever cause, this patient had a terminal episode of bleeding. It caused irreversible shock. She died in irreversible shock and untreatable bleeding. At autopsy, I think the pathologists will have found (1) a quantity of blood in the retroperitoneal space; (2) a mammoth recurrence in the periaortic area; and (3) the entire pelvis filled with tumor. It will be interesting to learn whether the autopsy material indicated the effects which the drug had

on the tumor. Also, in the light of the apparent hematemesis, we shall be interested in finding out whether there was any intravascular coagulation of the submucosa of the stomach, perhaps supporting the idea that this might have been an intravascular clotting episode.

Dr. Stamler: Thank you, Dr. Anderson. One point that you raised concerning the patient's course prior to her admission here was in regard to a biopsy of the lesion prior to the second course of radiation therapy. I am not sure I can clear that up. The patient's chart contains a statement that a biopsy was done and was positive for carcinoma, but I don't have any other verification. The original diagnosis was epidermoid carcinoma Grade III.

Dr. Henry E. Hamilton, Internal Medicine: What role does radiation play in bleeding in an area like this?

Dr. Anderson: Generally the radiation is not a problem as far as vaginal bleeding is concerned. We have had problem of radiation proctitis, with repeated hemorrhagic episodes, but I must defer to Dr. Latourette about vaginal bleeding. I don't believe there has been any.

Dr. Howard B. Latourette, Therapeutic Radiology: I should like to comment on the radiation therapy of this disease as well as to answer Dr. Hamilton's question. Carcinoma of the cervix is a serious disease. Its incidence has been referred to at the start of this meeting. It is one of the two major diseases in women. It is well known that the future control of this disease depends on the education of our society to prevent it or to arrange for its discovery and eradication in its early stages. If we were to take the next 100 women who walk through the door of our hospital with carcinoma of the cervix, we could anticipate that somewhere between 50 and 60 of them would be curable. Now if we could get 80 or 100 of those women in the very early stages of the disease, the cure rate, using methods we now have available, could be well over 75 per cent. Stage I carcinoma of the cervix, limited to the cervix, can be cured with either a proper surgical attack or with good radiotherapy in approximately 90 per cent of cases. We have reason to suspect that the lesion in our patient today was somewhat more advanced when initially treated—in Stage III, perhaps. Currently we are curing one out of three Stage III carcinomas of the cervix. Radiotherapy is usually given in a manner that involves both radium at the site of the primary, and external radiation to the areas adjacent to the primary. The latter does as good a job as possible in eliminating the neoplasm in the adjacent lymph nodes.

In general we try to apply external radiation to an area that involves all of the true pelvis. This relates to a topic which we will have to discuss later, in regard to this patient, for the major vessels that supply the region of the primary tumor, the cervix, are coming down in this general region, and of course the lymphatics that we are interested in irradiating are also in the lateral aspects of the pelvis. It doesn't matter much what the particular applicator is. We don't know from the protocol just what arrangement was used in our case today. We know only from the figure 7,200 mg. hrs. that it was a fairly intense radium application to the region. I have no way of knowing whether there had been a reasonable application to the primary. One of the things that we have gradually learned is that check films are essential if we are to know that the radium is really against the primary site that we wish to irradiate heavily. There is a tendency for any radium system to slip down into the pelvis and to be from one to three centimeters away from the primary site.

It seems to me that we can't say from the protocol just what the details were, in the handling of this particular neoplasm. The figures listed here contain several discrepancies. It would be almost impossible, for instance, to deliver a depth dose of 6,000 r in 14 cobalt treatments. Going at what we consider a very reasonable rate, it would take us 30 treatments to deliver that same amount of radiation to the deep part of that pelvis. It is reasonable to put in 200 r per day, but it is hard to put in much more than that. I therefore wonder just what we are dealing with, here, in the way of dosimetry. A recurrence at the apex of the vagina is a reflection on the radiotherapist. Something usually is wrong with the radium application. Therefore I raise the question about how resistant this particular tumor was. I don't think recurrence at the vaginal apex is necessarily evidence of radioresistance. I think there is another factor that has to be considered—the

adequacy and the accuracy of the radiotherapy!

As for the changes that were produced by the radiation that was given—regardless of how it was given—there was enough radiation during these several episodes, including treatment of the primary in the original course of therapy and the treatment of the subsequent recurrence, so that the pelvis, the vessels, the bladder, the rectum, the vaginal mucosa, the fibrous tissue of the pelvis, the lymphatics all got a fairly high dose of radiation. In general you can subject the vaginal mucosa to fairly vigorous doses. It certainly stands the heavy radiation that comes away from a radium source. We can produce necrosis, and if the necrosis is deep enough to cause quite an area of ulceration, the areas will eventually bleed. I should certainly agree with Dr. Anderson about the importance of the differential diagnosis of recurrent neoplasm and the radiation necrosis that can be produced. We have produced massive radiation necrosis at this institution. I personally have been responsible for doing it. In the use of radiation, the width of the path between causing undue damage and getting ahead of a neoplasm is not very great, so that we must be careful not to be overcritical in this situation. I should think that we are going to find that at autopsy there was pretty definite evidence in the vessels themselves of a fairly high level of radiation—endothelial proliferation increased in the thickness of the wall of a vessel—and I think that was partly responsible for this lady's failure to achieve hemostasis in her pelvis. The other contributing factors, I think, were the neoplasm, the radiation and the chemotherapy.

As for your question, Dr. Hamilton, about the direct effect of the radiation on the vaginal mucosa, I would be more concerned with the rather extensive necrosis that involved more than just the vaginal mucosa—the necrosis that can involve a whole segment of the pelvis and then the larger vessels. Where there are multiple sites of bleeding, I should expect the presence of extensive tumor to be a more important cause.

Dr. Stamler: The next participant I should like to call upon is Dr. Lawton. He will discuss the chemotherapy in this case.

Dr. Richard L. Lawton, Surgery: I hope you will take note of the therapeutic "batting order" here, for it will help clarify some of the problems that I face when I am called in to treat patients with far-advanced malignancy.

Cancers of the cervix have very little tendency to spread widely, to disseminate to the lung and bone and other places, and thus even after they recur we tend to go after them with considerable vigor and to use such operations as pelvic viscerectomy—taking out the bladder and the remaining pelvic viscera. Furthermore, from a standpoint of regional therapy, it is satisfactory in that the affected part of the body can be isolated. Its vascular system can be more or less isolated, and we can use regional chemotherapy in that area.

We have several different regional technics, and one of them happens to be an intraarterial perfusion that is different from what we did here. Intraarterial perfusion means isolating a part of the body and running a solution—a cytolytic agent—through this system, and then recovering it or washing it out. It is a single-shot procedure, taking perhaps an hour or two in the operating room.

The type of therapy used in this patient was intraarterial infusion, which is continuous, a procedure that we carry on for two or three weeks, at times. We do not try to recover the drug because the type of drug we use can be counteracted or antagonized by a known metabolite, or one that doesn't make any difference if it leaks into the circulation. The systemic complications of this drug are infrequent when it is given intraarterially. One can give it in doses as high as 30 mg./Kg. for 30 days without inducing any bone-marrow toxicity. One will get tremendous local toxicity. This may answer some of the questions about whether or not the low platelet count had anything to do with a hangover from the intraarterial infusion. As far as I know it did not.

I might also speak about the complication of neural irritation. I don't think it is due to the systemic drug. The pyrimidine antagonists—and 5-FU is a member of that group—infrequently produce neurotoxic signs, whereas some of the alkalating agents frequently do. I think perhaps there is an explanation for the sciatic irritation, however. It may be that our catheter was in a direct line with one of the branches of the inferior gluteal artery that

supplies the sciatic nerve. That can happen, but usually it is a minor problem.

The rationale for continuous intraarterial infusion has to do with the doubling time of these cancers, or of any cancer. We like to infuse the drug over a period of time that will find every cell in a vulnerable stage. That is why it is continuous. The vulnerable stage of the mitotic cycle is the interphase or the resting phase of the cell, while it is replicating deoxyribonucleic acid (DNA).

It is rare for a person who has infusion technics available to treat a primary cancer in this area. One might expect the results to be considerably better. This is indeed true, as Dr. Sullivan, of the Lahey Clinic, proved when he took a safari into Africa. In Africa there is precious little radium or cobalt or any other radiation source with which to treat such patients, so he used intraarterial infusion. Some of the results that he obtained, and which I have seen in photographs, are remarkable. His patients obtained high-grade palliation. I don't know whether he has conducted any long-term follow-up on those patients, but their primary lesions did disappear, and that is a degree of success that isn't altogether infrequent with intraarterial infusion or perfusion. Primaries may disappear and then recur after three or four months. In our patient we were dealing with a most resistant type of tumor. It had been disturbed by recent radiation therapy, and also by recent surgery, undertaken in an attempt to assess resectability.

We heat-seal catheters quite often. We like to do that if we anticipate needing to reuse them. Sometimes we have some bleeding as a result of catheter dislodgement, but that has been very infrequent. On several occasions it has happened, to my dismay, during the night after they have been put in. I think that the right-sided catheter did communicate with a space that held a tremendous hematoma.

The terminal event, as I envision it, was a hemorrhage that resulted in a large hematoma in the pelvis and subsequently in the abdomen. Ligation of both hypogastric arteries has been done quite often, and when we do reconstructive vascular work on the iliac arteries in the pelvis, we see them occluded, so we usually can ligate both hypogastrics without inducing necrosis of the pelvic viscera. In this case we ligated because we thought we might prevent some bleeding, though as a rule I don't like to ligate the vessel that I intubate and plan to infuse. The reason is that the flow in the vessel is decreased, and as a result the agent is not diffused uniformly through the tissues.

There may be several other things that could have been done for this patient. Hemicorporectomies have been done for localized advanced malignancy. This woman's disease, I think, was probably still localized in the pelvis. This extensive operation has been done successfully, but mostly in males with sarcomas of the pelvis.

Postmortem findings can be somewhat surprising in patients who bleed in response to therapy. I shouldn't be too surprised to learn that there wasn't a great amount of tumor in the pelvis, and that the necrobiosis that we think happened was a result of radiation plus infusion plus decreased blood supply to a large tumor mass with bleeding into it.

Dr. Stamler: At the time of autopsy, the findings in the pelvic region were the ones that have been anticipated by the various discussants. There was a large, fungating, partially necrotic and hemorrhagic mass presenting in the vagina. It was breaking down extensively, and there was a fistulous communication with the peritoneal cavity with very extensive necrosis of tissue, cellulitis and actual suppuration, peritonitis and, in addition, a very massive hematoma involving the pelvic, retroperitoneal and suprapubic tissues, with blood oozing through the abdominal skin incision. An estimated two liters of clotted blood and one liter of bloody fluid were present in the peritoneal cavity.

As for the tumor itself, I think Dr. Lawton has made a significant statement in predicting that it wouldn't be particularly massive as regards its intrapelvic extension. There was extensive neoplastic involvement of the cervix and the contiguous portions of the upper vaginal wall, but the intrapelvic extension was not massive. When Dr. Dunn explored this patient, he called upon me to help determine, as best we could, the extent of the carcinoma. He gave me several pieces of tissue from various areas of the pelvis, and the first four of them were negative for neoplastic involvement,

though they showed very extensive radiation changes. The fifth one, which he had obtained from the right lateral wall in the region of the sciatic notch, did contain viable tumor that was growing in hyalinized stroma showing very apparent radiation effects. I think that much of what had been noted in the intrapelvic region was tissue damaged by radiation, and the tumor extension was not nearly so massive as one might have anticipated. No distant metastases were found, no lymph-node metastases, and no involvement of liver, lungs and other distant sites.

There was an overabundance of causes of death, and the most likely one was massive hemorrhage. But certainly the bacterial infection must have been an important contributing cause. In regard to the hemorrhage, no specific site of massive bleeding was determined. The ligated right hypogastric artery was surrounded by hematoma and necrotic tissue, so that very likely some branches of that vessel were involved, but no single major vessel was identified as the source of hemorrhage. There was no particular evidence of a generalized hemorrhagic diathesis at the time of autopsy, and only relatively mild renal changes.

The first section to be shown is from the biopsy of the cervical carcinoma at time of the patient's admission to this hospital, approximately one year after the initial diagnosis was made. Shown here is the necrotic hemorrhagic surface of this fungating mass, and here is viable neoplasm. It appears to be quite viable epidermoid carcinoma. It doesn't show too much obvious radiation effect. The more superficial layers are rather degenerated in appearance, but under the circumstances of sloughing, infected hemorrhagic environment, I am not sure we can specifically implicate radiation effect in these changes. We see some indication of radiation damage to vessels, thick-walled arterioles with prominent endothelial cells.

Under higher magnification, the tumor shows very obvious and rather normal appearing mitotic activity. If you wish to grade or classify this tumor, it falls nearest to the small-cell type of epidermoid carcinoma. The smallness of the cells is not so marked as it is in some cases of cervical carcinoma. I don't have sections of the original tumor before treatment, but it was rather comparable to this particular area. There had not been a great change in that regard.

In the intrapelvic mass from the region of the sciatic notch, you see nests and strands of neoplastic cells in very abnormal, dense, hyalinized connective tissue, illustrating one of the late aftermaths of radiation damage to tissue.

At the time of autopsy, the tumor from the cervical-vaginal mass was a raw, sloughing, necrotic surface overlying viable neoplasm. Lymphatic invasion from the same area indicates a fairly aggressive pattern of growth. The vessels show obvious thickening and hyalinization in accord with radiation effect. A higher-power view of the neoplasm shows a large mass of partially keratinized debris, necrotic tumor cells have been piling up, and in the basal area many of the cells are very abnormal. These are the changes of a type seen following irradiation or other procedures affecting neoplastic cells—enlargement of cells and their nuclei, with vacuolation of nuclei and cytoplasm.

Sections from the tissue deep within the pelvis show dense, fibrotic, abnormal tissue. Within the vessels are masses of neoplasm. The neoplastic cells don't show nearly the degree of change that we saw in the vaginal portion of the tumor. Whether this tissue was more protected from the effects of chemotherapy, I am not sure, but at any rate this tumor looks more viable than the vaginal tumor did.

A section of the right hypogastic artery or one of its branches shows thrombus filling the lumen, and chronic irradiation changes in the surrounding tissue.

Another section shows a fairly large vessel which probably was an artery but now is completely occluded. One can just barely make out the outline of this vessel. Many of the smaller vessels show fibrinoid or hyaline changes of their walls.

The bladder wall shows diffuse acute cellulitis. Many of the connective tissue cells are abnormal fibroblasts of the type we see following radiation therapy. Most of this tissue is densely fibrotic and almost avascular.

The esophagus showed the acute necrotizing inflammation and superficial ulceration which we frequently find in patients who die in a

manner similar to this patient's, probably associated with regurgitation of gastric contents. There was very extensive aspiration of gastric contents in the tracheobronchial system and lungs at the time of autopsy. There was no associated inflammatory reaction, and I am sure this was a terminal event, or could even have occurred postmortem, with the moving of the body.

Involvement of the kidneys was mentioned. There was some tubular degeneration, with casts mostly in the distal convoluted tubules, whereas proximal tubule cells showed the peculiar type of distention and vacuolation that is characteristic of the effect produced by mannitol, sucrose or related compounds such as the dextrans. It is a reversible lesion that probably has no serious implications.

I want to comment just a bit about the problem of relating radioresistance to the histologic and other features of the neoplasm. There have been numerous attempts to do this by studying the host-tissue reaction, by studying the reaction of the normal tissue of the body to irradiation, and by studying the reaction of the neoplastic tissue to irradiation. Certain investigators have reported findings with a fairly good correlation to radiosensitivity and resistance, using these methods. This neoplasm would fit reasonably well, histologically, into a category that one might anticipate would be radioresistant. That is a complicated subject, but it certainly is worthy of further study.

SUMMARY OF NECROPSY FINDINGS

1. Epidermoid carcinoma of cervix, post-irradiation and chemotherapy, with vaginal-peritoneal fistula
2. Massive hematoma, pelvis and retroperitoneum, with hemoperitoneum
3. Necrosis and acute suppurative cellulitis, extensive, pelvic region
4. Peritonitis, subacute, generalized, moderately severe
5. Acute esophagitis, with superficial ulceration
6. Tracheobronchial aspiration, gastric contents, terminal
7. Renal tubular nephropathy, consistent with mannitol nephrosis.

STUDENT'S DIAGNOSES

1. Carcinoma of cervix
2. Shock from blood loss.

DR. ANDERSON'S DIAGNOSES

1. Recurrent carcinoma of cervix
2. Irreversible shock due to blood loss.

Seventh Annual Orthopaedic and Rehabilitation Seminar

Saturday, April 6, 1968

YOUNKER MEMORIAL REHABILITATION CENTER
Des Moines, Iowa

PROGRAM

(All sessions will be held in Ralph L. Jester Auditorium, Iowa Methodist School of Nursing, 1117 Pleasant Street)

9:00 a.m.-10:00 a.m. "Metal Failures"—Jonathan Cohen, M.D., assistant clinical professor of orthopaedic surgery, Harvard University, Boston

10:00 a.m.-11:00 a.m. "Correction of Deformities and Length Discrepancies Following Epiphyseal Injury"—Homer Stryker, M.D., Kalamazoo, Michigan

11:00 a.m.-12:00 m. "Systems of Therapy Used in Cerebral Palsy"—Raymond Rembolt, M.D., professor of pediatrics, University of Iowa, College of Medicine, Iowa City

12:00 m.-1:15 p.m. LUNCH—Ruth B. Jester Gymnasium

1:15 p.m.-2:15 p.m. "Nerve and Vascular Injury to Upper Extremities"—John A. Boswick, Jr., M.D., director of hand and burn surgery, Cook County Hospital, Chicago

2:15 p.m.-3:15 p.m. "Spondylolisthesis"—Edward D. Henderson, M.D., assistant professor of orthopaedic surgery, University of Minnesota, Minneapolis, and consultant in orthopaedic surgery, Mayo Clinic, Rochester, Minnesota

3:30 p.m.-4:30 p.m. "Idiopathic Aseptic Necrosis of the Femoral Head"—Michael Bonfiglio, M.D., professor of orthopaedic surgery, University of Iowa, College of Medicine, Iowa City

4:30 p.m.-5:00 p.m. TOUR OF YOUNKER MEMORIAL REHABILITATION CENTER (Walter L. Modaff, M.D., associate physiatrist, will accompany those physicians wishing to tour the Younker Center.)

(Discussion time will follow each presentation.)

President's Page



What physician does not despair of misleading news stories which imply that costs of medical care are unreasonable?—which suggest that American medical care, measured by infant mortality rates and longevity statistics, is less than the best?—which contend that we neglect the poor?

The social planners have foisted upon the populace a something-for-everybody Medicare program at vast cost. Not at all satisfied, they continue to rock American medicine with further volleys against its foundation of individual enterprise, private practice and the doctor-patient relationship.

Increasing in popularity with social planners is a system of regimentation known as closed-panel medicine. (They call it "group practice.") Advocates of this "health care" concept are promulgating their story near and far. Its public acceptance and broad implementation will wrest from the physician what remaining control he has over his own professional destiny.

Can any thinking individual believe an expanded system of governmental medicine will bring about a new higher order of quality and efficiency of medical care?—at less expense?—with shorter periods of waiting to see a doctor or to be admitted to a hospital? Look at Great Britain!

Countering unfair accusations and half truths is frustrating. Yet individual doctors must do a lot of it. So must medical societies.

It is imperative that we continue to respond. It is imperative too that we gather and report new facts to show the public that we remain dedicated to our historically successful endeavor to give the American people the best medical care in the world—an achievement in free enterprise.

R. F. Birge

President



Editorials

GERIATRIC PRACTICE

Musing on the subject of middle age, THE LANCET for November 25, 1967, asserts, "Middle age begins when youth fades, hopes, ambitions and delights wane, and the shadows of decay and death are first perceived. The clinical features are real and objective—thinning or graying hair, increasing girth, lessening acuity of sight, slackening of neuromuscular spring and agility, the advent and accomplishment of the menopause; all these well-known phenomena, part physiological, part pathological, part inevitable, part not, lie in those 10 or 15 years of life. How things pan out for the individual during them depends on the interactions of constitution, environment past and present, accidental happenings, character of and relations with spouse and children—to put it more briefly, the luck of the draw and the management of life. The outcome will be largely settled before middle age is entered."

The individual can do little about "the luck of the draw," but "the management of life" is largely in his own hands. The counsel of a wise and considerate physician can help the individual work out his destiny, make plans for the future and help make the rough places smooth. No life can be all smooth sailing, and it is the family doctor who is called upon to help man sail his craft, in fair weather and in foul.

THE BILLS THAT PEOPLE LEAST LIKE TO PAY

The editorial page of the January 14, 1968, issue of the DES MOINES SUNDAY REGISTER reported the result of a poll under the headline "76 Pct. of Iowans Think Health Costs Too High."

According to the report, some 64 per cent of the families in Iowa—approximately 550,000 in number—contained one or more individuals who consulted a physician during 1967 for some reason other than a routine physical check-up. The number of households polled and the number of those households in the various income brackets were not given. Also, there was no indication of the percentages of urban and rural residents.

The poll indicated, however, that 76 per cent considered the cost of medical and hospital services too high; 22 per cent thought they were about right, and 2 per cent expressed no opinion.

The poll also revealed that 7 of 10 Iowans considered the prices charged for prescription drugs were too high, and half of those polled would favor price regulation. Among those with an annual income under $5,000, 79 per cent considered drug costs too high in comparison with other goods and services they buy today. For those in the $5,000 to $8,000 bracket, 69 per cent thought the cost of drugs too high,

and 61 per cent of those with incomes over $8,000 concurred in that opinion.

Somehow such a poll would have more meaning if medical and hospital costs were related to those of other services and basic necessities. It should be pointed out both to the pollster and the polled that illness is unwanted and unexpected, and that the physician's fee is never paid with any great glee. It is not unlike the payment of increased federal taxes for the prosecution of an unpopular military misadventure. It is no secret that the doctor's bill is usually the last one paid. It may come as a surprise to the layman that the physician's overhead today is about one-half of his gross income, and that the books of the average doctor are cluttered up with unpaid accounts. It is also fitting to keep in mind that the doctor's work week is far in excess of the conventional 40 hours.

In any consideration of hospital costs it should be recognized that there are about 2.5 employees for each patient, and that many of those employees are professionals or highly-trained technicians. The wage spiral has entered the costs of hospital operation, just as it has influenced the cost of a new automobile. The need for new and highly sophisticated equipment has also added to the costs of hospitalization.

It would seem reasonable to inquire whether the cost of clothing, of shoes and of shoe repairs are too high or too low. What of the costs of staple foods, of meat, of milk? What about the bill for automobile repair, for a service call by the plumber or the electrician, or for the man who puts the TV back in working order? What of the costs at the barber shop and the beauty parlor? What of taxes? Does the increased cost of educating children present no problem or concern?

Physicians agree that the costs of medical and hospital care are high, but can anyone name any service that isn't comparably expensive? Until governments at all levels learn to live within their incomes and to exercise a reasonable measure of thrift, as every sensible family has learned to do, costs are not going to get better fast, and this principle applies not only to the cost of medical care but to the cost of apples and of hamburger.

The public and the press are somehow resigned to the escalation of the wage scale at the termination of each labor contract and, for example, the steady succession of increases in the price of any specific make and model of automobile from year to year. Inflation has its impact upon the costs of medical and hospital care, just as it has upon the remainder of the economy. Moreover, it can be predicted with great certainty that the more the federal government undertakes to provide health care to its citizens, the greater will be the cost. Efficiency and economy are somehow not characteristic of governmental agencies.

Despite allegations to the contrary, the vast majority of physicians still possess the quality of mercy and do not seek a pound of flesh. Surely few would survive the long period of schooling and of training, the hard work, the necessary sacrifices and self-discipline, if they were motivated by anything other than idealism and the opportunity to serve mankind.

SECOND-GRADE SEMANTICS

At a recent parent-teacher conference, a physician's wife received an illuminating report concerning her daughter, an enthusiastic and happy second-grade pupil. The teacher related that in spelling class, the word *patient* was presented to the children, and there was some discussion of what it means "to be patient." The class was then given an assignment. Each child was to write a sentence using the newly-learned word. Much to the teacher's surprise and amusement, the physician's daughter turned in the sentence: "The patient was very sick but the doctor could not give her penicillin because she was pregnant."

PERIPHERAL VASCULAR DISEASE

In a recent article on the subject of peripheral vascular disease, Gifford, of the Division of Medicine at the Cleveland Clinic Foundation, emphasizes the importance of the history and the physical examination in diagnosing chronic occlusive arterial disease of the extremities.* He says that the cause, in more than 95 per cent of cases, is atherosclerosis obliterans. Next in frequency is thromboangiitis obliterans or Buerger's disease. Arterial trauma, embolic occlusion when the extremity survives the acute episode, and idiopathic thrombosis are much less common causes.

The predominant symptoms of chronic occlusive arterial disease are those of ischemia, and they are similar regardless of the etiology, the Cleveland physician asserts. He emphasizes that coldness of the extremities, particularly when it is only subjective and symmetric, numbness and paresthesias of the extremities, and nocturnal leg cramp are usually *not* symptoms of ischemia, though they often are mistakenly thought to be due to this cause. The first symptom of ischemia in the lower extremities is usually intermittent claudication, manifested by discomfort (not usually described as pain) or weakness that appears only when the person is walking and disappears within five minutes afterward, regardless of whether he sits down or remains standing. Depending upon the location of the occlusive process, intermittent claudication can occur in the muscles of the foot, the calf, thigh or buttock, or the upper extremity.

Gifford points out that the onset of pain when the limb is at rest is an indication of a worsening of the ischemia. In contrast to the pain of intermittent claudication, the pain of ischemic neuropathy affects large segments of the extremity and occurs in paroxysms of severe, lancinating, shock-like waves. As the ischemia progresses, the pretrophic pain is deep, steady, boring discomfort localized to the most severely ischemic digits and the adjacent portions of the foot, and is an indication that tissue necrosis is imminent. The pain of ulceration and gangrene is similar, but it is more severe and is localized to the areas of necrosis. All types of pain at rest are typically worse at night, and usually some relief can be obtained by placing the limb in a dependent position.

The most important physical finding in chronic occlusive arterial disease is the absence or the lessening of the amplitude of arterial pulsations. The clinician must be aware that the dorsalis pedis pulsation may be absent in normal individuals due to anomalies. That absence is said to occur in about 5 per cent of the population. Gifford emphasizes that it is perilous to make a diagnosis of chronic occlusive disease where the peripheral pulsations are normal, except in the unusual situation where the occlusive disease is confined to small distal arteries or to a localized segment of the terminal aorta or iliac arteries, and where collateral vessels provide pulsatile flow to the distal arterial tree. It is in conditions such as these that arteriography is necessary in making the diagnosis. However this visualization is indispensible to the surgeon if he is to determine the extent of the disease. The finding of a systolic bruit over the abdominal aorta or the iliac or femoral arteries is indicative of atherosclerosis, but it does not necessarily imply that the process is occlusive. It should be recognized that in occlusive disease a bruit is frequently absent.

According to Gifford, the most reliable index of the degree of ischemia is that provided by the postural-color and venous-filling tests. With the patient in a supine position, the legs are elevated for at least one minute and the color of the feet is carefully observed. The greater the pallor, judged on the basis of 0 (none) to 4 (extreme pallor), the more severe the ischemia. Then the feet are placed in a dependent position, and the time required for the return of normal color and for the collapsed veins to become distended is noted. Normally, he says, the color should return in five seconds. When the color does not return for 10 seconds, the part is definitely ischemic. A delay of more than 20 seconds is an indication of severe ischemia. In a normal individual the veins on the

* Gifford, R. W.: Peripheral vascular disease: diagnosis of chronic occlusive arterial disease of extremities. OHIO STATE M. J., **63**:1606, (Dec.) 1967.

dorsum of the foot or hand refill within 10 seconds after the limb is placed in a dependent position. Ischemia is indicated if it requires more than 20 seconds for them to become fully distended. Severe ischemia is indicated by a delay of more than 40 seconds. It should be recognized that an incompetent venous return negates this test. The degree of rubor in the dependent extremity is as significant as the degree of pallor in the elevated limb.

The author asserts that the numerous tests requiring sophisticated equipment for the measurement of blood flow are not substitutes for a careful history and physical examination, and they are not essential for the diagnosis of chronic occlusive arterial disease. As a matter of fact, the results of such technical procedures can be misleading, particularly if they are not interpreted in relation to the patient's medical history and the findings elicited by the physical examination.

* * *

Another recent article on this subject, by Dotter and Judkins, of the University of Oregon Medical School, should be of considerable interest to the clinician.† From their report it would appear that a newly developed catheter technique for the treatment of atherosclerotic ischemia of the lower extremities has a definite place in the treatment of this formidable condition, particularly in the poor-risk patient.

The Oregon physicians first describe the atherosclerotic process as the progressive replacement of the thin arterial intima by a thick, amorphous, mostly noncellular, collagenous, lipid-containing core surrounding and variably encroaching upon the lumen. Accompanying the pathologic process, other changes are common—mural hemorrhage, cellular infiltration, loss of elastic and muscular elements, calcification, thrombus formation with gradual fibrous organization, and a tendency for the atheromatous core to separate from its surrounding wall. Although the disease is usually generalized, the major clinical problems are the result of proximal obstructions. The most commonly encountered points of narrowing of the lumen are the coronary arteries, bifurcations of the carotid arteries, the bifurcations of the aorta, the iliac and femoral arteries, and the division of the popliteals. Localized narrowing in these and other sites often leads to a reduced blood flow, thrombosis and, ultimately, complete occlusion.

The procedure described by Dotter and Judkins consists of threading a cardiac catheter-guide through the area of occlusion, or the narrowed segment, and then passing successively larger catheters over the guide wire to produce recanalization of the narrowed or obstructed artery. Except for the compression of the atheromatous core radially, which increases the lumen of the artery, nothing is removed from, or moved up and down, the artery.

The operation is done under local anesthesia and is carried out in the cardiovascular-procedure room of the x-ray department. In treating a patient with typical ischemia of the lower extremity, an arterial needle is inserted, pointing distally, within the lumen of the superficial femoral artery. A long, slender, flexible catheter-guide is passed through the needle and into the arterial lumen. The needle is then removed to permit the passage of a radiopaque cardiac catheter over the guide. The first step is the insertion of a contrast medium and the taking of angiograms. Then the vessel is irrigated with a heparin solution. The coil-spring guide is cautiously maneuvered, distally, to the point of obstruction as demonstrated by the angiogram, and then is advanced into the obstruction. When the resistance is overcome, the guide is passed into the patent popliteal artery. A Teflon® catheter is then passed downward over the guide and through the obstruction, and subsequently a considerably larger catheter is passed over the first one. It is pointed out that the passage of the second catheter requires considerable force and patience, and its passage is facilitated by rotation. The guide and inner catheter are removed, contrast medium is injected, and the position of the material is confirmed by fluoroscopy. Heparin solution is again injected, the large catheter is withdrawn into the upper portion of the superficial femoral artery, a final angiogram is made, heparin irrigation is again carried out, the catheter is

† Dotter, C. T., and Judkins, M. P.: Transluminal recanalization in occlusive disease of leg arteries. GP, 37:(1)98-106, (Jan.) 1968.

withdrawn, and prompt, careful, manual pressure is applied at the site of arterial puncture to prevent hematoma formation. The entire procedure is said to require about one hour.

Dotter and Judkins say that the best therapeutic opportunity is offered by the patient whose artery is severely but not completely occluded. In such individuals a suitable transobstruction pathway can usually be found, and lasting benefit can be conferred in up to 80 per cent of cases. Unfortunately most patients have been referred after gangrene has developed, and the majority of them have developed a secondary occlusion almost to the point of origin of the superficial femoral artery. The chances for establishing a probe pathway through the peri-atheromatous cleavage plane is greatly reduced in these advanced cases. One advantage of the technique is that it can be repeated, and in one patient four separate procedures were required to provide a durably patent artery.

The overall success rate, including the poor candidates for correction, has varied from 33 to 50 per cent. From 15 to 20 patients have been spared amputations by this means. This group of patients, and the majority of others in the series, were found to be unsuited for conventional surgical revascularization, either because of poor physical condition or the inadequacy of run-off arteries.

A total of 167 patients were treated by the method of transluminal recanalization by the Oregon group. Only one death resulted, and it was from coronary occlusion. In contrast, 21 of 99 patients failed to survive leg amputation done at the same medical center since January, 1964. In two reported series of surgical reconstructions of lower-extremity occlusive disease, the mortality was much higher than in the transluminal series. Although comparisons with reconstructive vascular surgery in terms of failures and morbidity are not easy to make, according to Dotter and Judkins the results attained by that method are considerably poorer than those achieved by transluminal recanalization. They also assert that the more serious the disease, the greater the margin of safety of their method over reconstructive surgery.

In four or five patients the attempted transluminal effort led to or hastened the need for amputation. The failures were usually due to the inability of the physicians to establish a satisfactory pathway across the block. Hemorrhage due to inadvertent perforation occurs occasionally. However this has not been so serious as bleeding from the proximal puncture site.

The authors emphasize that the ideal candidates for transluminal recanalization are those with subtotal narrowing at the level of the adductor hiatus and a good femoral pulse. It is in these patients that the procedure can be expected to result in a lasting patency and the disappearance of all symptoms. Also, short-segment occlusions of the superficial femoral artery are best treated in this manner. Bypass grafting is considered the method of choice in patients with long-segment occlusion of the superficial femoral artery if the run-off arteries are in satisfactory condition. It should be remembered, however, that both grafts and localized endarterectomies sometimes fail, and even then the technique described by the authors may still be used advantageously.

In the authors' judgment, lower-extremity amputations for ischemia should not be done without an assessment of the possible salvage of the limb by transluminal therapy. It is important to remember that obstructive ischemia often develops slowly over a period of years, and in contrast to an acute occlusion a very slight improvement in blood flow may lead to striking clinical improvement.

Dotter and Judkins conclude with the statement: "There is little reason why [this procedure] should not be made available in any community hospital with a modern x-ray department and physicians who are willing to learn the procedure." The one essential is a physician experienced in arterial catheterization. However they emphasize that "the development of an optimum technique and attainment of its full clinical potential will require the participating support and skilled hands of vascular surgeons."

* * *

Still a third recent article on femoro-popliteal arterial occlusion, from the Department of Surgery at Queen Elizabeth Hospital, Birmingham, England, and the University of Birmingham

Medical School, is a significant contribution.‡

The members of the Birmingham surgical group say that their experience with arterial homografts and synthetic bypass prostheses for femoro-popliteal occlusive arterial disease was unsatisfactory, and as a consequence they abandoned those methods and replaced them with autogenous vein by-pass grafts, or under certain circumstances thromboendarterectomy. They report the results of 87 femoro-popliteal autogenous vein by-pass grafts performed between January, 1962, and July, 1965, and the progress of the patients to January, 1966, with the exception of six who died. Except for two cases of traumatic arterial injury, the indications for operation were those of atherosclerotic arterial occlusive disease.

All of the patients in the study had intermittent claudication of such severity that walking in a hospital corridor at their accustomed pace was limited to 100 yards. Popliteal and pedal pulses were absent in all patients, and in 43 limbs there was rest pain, with trophic changes in the foot. Arteriography was carried out in each case.

At the follow-up examination, grafts were designated successful if pulsation was present in the graft itself, or if pedal pulses were present. If this outcome resulted, there usually was relief of claudication and other evidence of ischemia. However in two patients with patent grafts, the symptoms were not relieved, presumably because of disease of the distal arteries.

The technique employed consisted of dissecting free the long saphenous vein of the affected limb through two incisions in the upper and lower thirds of the thigh. After removal, the vein was irrigated with a heparin solution. The reversed vein was then anastomosed to the popliteal artery, end-to-side, and it was then passed subcutaneously to the groin, with great care to avoid twisting. Then what previously had been the distal end of the removed vein was then anastomosed to the common femoral artery, end-to-side. Both anastomoses were left incomplete to permit flushing-out, and they were completed just before closure of the incisions.

There were 87 grafts in 79 patients, only 10 of whom were women. The peak age incidence was between 50 and 69 years. There were no operative deaths in the series, but six patients died at intervals varying from five to 26 months following the operations. In five of the six patients who died, the grafts were patent at the time of death. The follow-up periods ranged from six to 59 months. Occlusion of 27 grafts occurred in 25 patients—six of them within 28 days following surgery. The authors report that of the 87 grafts performed, 93 per cent were patent at the time of the patients' discharge from the hospital. At six months, 91 per cent of the 79 surviving grafts were patent. Of 62 grafts available for review at one year, 16 were late failures, and the patency rate was 73 per cent. At two years 21 grafts were available for study, and of those there were six late failures and the patency rate was 67 per cent.

In the study group of 79 patients there were 43 in whom there was rest pain, ischemic ulceration or even frank gangrene, with imminent risk of amputation of a limb. There were two additional patients with severe arterial injury to the thigh from shotgun wounds, in whom amputation threatened. Follow-up study revealed that in 22 patients the grafts were still patent and functioning satisfactorily, and their symptoms were completely eliminated and their ulcerations were healing. In 20 patients the grafts had thrombosed, and in 12 of them amputation had been necessary. In the eight in whom thrombosis had occurred and amputation had not been performed, there was evidence of vascular insufficiency but the patients were free from pain and ulceration. The remaining three patients died; however in each case the graft was patent at the time of death. Thus the authors concluded that 33 out of 45 limbs had been saved, or that three out of every four limbs which otherwise would have been amputated were salvaged. They were impressed by the fact that in some patients in whom grafts subsequently failed continued to have functionally useful extremities, a finding which they called "the tiding-over concept."

The British surgeons conclude with the assertion: "We believe that autogenous vein by-

‡ Baddeley, R. M., Lawson, L. J., Ashton, F., and Slaney, G.: Evaluation of autogenous vein bypass grafts for femoro-popliteal artery occlusion. BRITISH M. J., 2:410-413, (May 13) 1967.

pass graft is valuable and indeed probably the best technique at present available for the treatment of the long femoro-popliteal artery occlusion." In their experience, "in those patients with a severe disability or where the loss of the limb is imminent, two grafts out of three will be patent two years after the operation, and the limb salvage rate in cases of advanced vascular insufficiency is 73 per cent."

IN A LIGHTER VEIN

In a symposium at a meeting of the Royal Society of Medicine, in June, 1967, David Daube, regius professor of civil law at All Souls College, Oxford, strayed from a discussion of euthanasia and presented his definitions of the three ages of man: "I suggest that a young man is one whom a pretty girl can make happy or unhappy; a middle-aged man is one whom a pretty girl can make happy but no longer unhappy; and an old man is one whom a pretty girl can no longer make either happy or unhappy."

The same man, speaking of the physician's dilemma in deciding whether a person's usefulness to society should influence the prolongation of life, asserted that he found women of greater use than men. When some of his colleagues disagreed, he supported his viewpoint by relating the following tale: "There is a shipwrecked party: two Italians and an Italian woman; two Frenchmen and a Frenchwoman; two Englishmen and an Englishwoman; and two Russians and a Russian woman. Those twelve are stranded on a desert island. By the third day the following situations have developed. One of the Italian men has murdered the other, and has settled down with the woman. The two Frenchmen have come to an amicable arrangement and have settled down to a *menage à trois.* The two Englishmen have murdered the Englishwoman and have settled down. And the three Russians have drafted a letter to Moscow asking for instructions."

HOW TO LIVE LONGER, OR DRIVE TO LIVE!

When you are driving 60 miles per hour and see trouble ahead, your car will have travelled 60 feet before you can touch your foot to the brake pedal!

Meeting of the
IMS NOMINATING COMMITTEE

2:00 p.m., Sunday, March 24

IMS Headquarters Building

West Des Moines

Meetings of the Nominating Committee are open to all members of the IMS in good standing, except when the Committee goes into executive session.

Letters to the Editor

Dear Sir:

The ability of physicians to maintain life for very long periods in the unconscious patient raises the question as to how long such skills should be deployed. As physicians we are eager to promote the recovery of everyone who can do so. In order to deprive no one of his chances on this score it is relevant to know the longest periods of coma which have been followed by useful survival.

A committee of the Massachusetts General Hospital is studying our own records and the world literature to determine pertinent features in all patients who, *despite coma for over 5 weeks,* have made a useful recovery. We think it is vital not to overlook any well documented patient in this category. We should be grateful if any reader of this journal would draw our attention to any case published under a title which is not indicative of survival after prolonged coma. We are also eager to receive accounts of such cases as yet unreported. A publication incorporating our own and others' data is planned.

We should be grateful if you would publish this letter in your journal either in a section for correspondence, as a special brief communication, or in any other fashion you see fit.

Sincerely yours,
WILLIAM H. SWEET, M.D., D.Sc.
Chief, Neurosurgical Service
Chairman, Committee on Management of the Unconscious Patient
Massachusetts General Hospital

Boston, Massachusetts 02114
January 24, 1968

THE JOURNAL *Book Shelf*



BOOK REVIEWS

PATIENTS, DOCTORS AND FAMILIES, by *Faye C. Lewis*, M.D. (Garden City, New York, Doubleday & Co., Inc., 1968. $4.95).

This little book of less than 150 pages was written by a Webster City, Iowa, physician who, with her husband, has been in general practice for many years. It reflects unusual insight, empathy, compassion and understanding, and it is written with charm and wit.

The reader should not expect to find in it a succession of case histories or of medical conquests, but rather to enjoy human nature as portrayed by a discerning physician. It really is a compilation of personalities encountered in the daily rounds of a busy, happy and conscientious doctor. Any physician will recognize some of his own patients in the people so clearly depicted by Dr. Lewis.

The volume is commended to the physician for some pleasant reading, a great many chuckles, and a means of escape from his daily toil and from a troubled world. In turn, the physician can commend it to his patients in the hope that it may give them an improved understanding of human caprice and that it will hold up a mirror in which they may recognize their very own selves.—*Dennis H. Kelly, Sr.*, M.D.

ATLAS OF INFANT SURGERY, by *J. Eugene Lewis*, M.D. (St. Louis, The C. V. Mosby Co., 1957. $21.00).

This is a fine collection of illustrations of the surgical problems most frequently encountered in the newborn infant and child. It contains 258 pages, and is a true atlas. The pictures are accompanied by succinct descriptions of symptoms, needed diagnostic tests, and enough embryology to clarify the problem at hand. Thereafter, there is a brief description of the surgical technique, with particular attention paid to safeguards.

Dr. Lewis recognizes that much pediatric surgery is done by general surgeons, and he has planned his text so that those men can anticipate difficulties and provide infants with better surgical care and management than they might otherwise furnish. The book is filled neither with vast numbers of case reports and statistics, nor with eponyms.

In the illustrative area, the guides are frequent enough, yet there is no effort to show every step in the surgery to the reader. The "how to's" and "why's" are readily apparent. There is no clutter of controversies, and important points are not buried in masses of personal results. The index is clear and can be readily used. The bibliography provides classic references from which one can glean the minutiae that the Atlas has avoided.

The contents are not arranged in order either of the frequency with which the problems occur, or of their difficulty. Rather, the arrangement appears to have an anatomic basis—first the upper viscera and afterward the lower.

I doubt that the student or surgical resident would come to regard this book as his most treasured source of information, but I believe that surgeons, interns and general practitioners can use it for quick reference, because the Atlas is clear, brief and practical. The pediatrician, too, can use it as a surgical reference.—*Robert B. Stickler*, M.D.

NEUROPSYCHIATRY IN WORLD WAR II, VOL. I, ZONE OF THE INTERIOR, ed. by *Col. Albert J. Glass*, MC, USA (Ret.), and *Lt. Col. Robert J. Bernucci*, MC, USA (Ret.), (Washington, D. C., Office of the Surgeon General, Department of the Army, 1966. $7.50).

The volumes comprising the official history of the Medical Department of the United States Army in World War II are prepared by the Historical Unit, U. S. Army Medical Service, and published under the direction of the Surgeon General, U. S. Army. The volumes are divided into two series:

(1) The administrative or operational

(2) The professional, or clinical and technical.

This book belongs to the latter series.

The editor in chief is Col. Robert S. Anderson, MC, USA, and the editors for neuropsychiatry are Col. Albert J. Glass, MC, USA (Ret.), and Lt. Col. Robert J. Bernucci, MC, USA (Ret.). Many reservists of all services remember Col. Glass and his talks on the reactions of both Armed Forces personnel and civilians to disasters of various natures. Col. Glass spoke in Des Moines, on January 21, 1959, at the annual meeting of the Polk County Medical Society.

This volume expresses the ideas of some 35 major authors and some 70 collaborators. It truly is an account of neuropsychiatry's coming of age. It is felt that it will remain for years as the best work on the history of modern neuropsychiatry.

Attention must be called to Chapter 28, the closing chapter, entitled "Lessons Learned," written by Col. Glass. It would be well for each new medical officer in any branch of our services to read that chapter when he embarks on a tour of active duty, as so many men are doing right now.

The review copy of this book has been placed in the staff medical library at Iowa Lutheran Hospital, Des Moines, and is available there to all interested physicians.—*C. Harlan Johnston*, M.D.

BURNS, SHOCK, AND PLASMA VOLUME REGULATION, by *Carl A. Moyer*, M.D., and *Harvey R. Butcher, Jr.*, M.D. (St. Louis, The C. V. Mosby Co., 1967, $18.50).

Throw away your notes and old books, boys, for the time of enlightenment is at hand. To coin a phrase, a new era has dawned—specifically, in the form of a new book: BURNS, SHOCK, AND PLASMA VOLUME REGULATION, by Moyer and Butcher. If you read this book . . . well, nobody could actually read it . . . but if you peruse it selectively, you will get the final word—the message, so to speak—on the treatment of burns.

You question that? Well the book says so. And what's more, if you read—pardon, peruse—the book, you'll believe it, too. A quotation from its pages is in order (page 331): "More than 90 per cent of that which has been written and said about burns during the last 50 years can be disregarded because it is false. Should there be doubt of the validity of the above statements, they can be tested by following, to the letter, the general treatment of burns and shock outlined below." What follows, of course, is the appropriate list of instructions.

Be that as it may, it is difficult to know just who should or would buy this book. The first 257 pages appear to be very scientific; much of it—literally page after page—is taken up with charts, graphs, tables, formulae, experimental data, and statistics, as well as detailed case histories in fine print, and detailed experiments in fine print. The final 55 pages comprise an appendix which consists entirely of statistics, tables, and graphs of such things as the "logarithmic expression of bacterial density" and the "mean serum sodium concentrations associated with controlled hemorrhagic shock in dogs." Between the first 257 pages and the final 55 pages, there remain 108 pages of practical value to a practicing physician. And somewhere in the 108 pages is an extremely concise and useful outline of the steps to be taken in the actual care of patients with large burns.

Don't buy the book, friends, but sometime, somehow, get the message: Apply 0.5 per cent silver nitrate dressings, cover them with dry sheets or blankets, and administer lactated Ringer's solution intravenously (often as much as 10-20 liters in the first 24 hours). These measures, the book says, control infection, control something called "negative vaporizational thermal loading," and prevent salt imbalance—the three deadly perils of burns. And by the way: if you've still got some spare plasma lying around after reading and heeding a previous book on burns, throw it away—the plasma that is, and as I said, the book too!—*Daniel F. Crowley*, M.D.

BOOKS RECEIVED

PATHOLOGY OF INFANCY AND CHILDHOOD, by *John M. Kissane*, M.D., and *Margaret G. Smith*, M.D. (St. Louis, C. V. Mosby Company, 1967. $39.50).

PRINCIPLES OF NUCLEAR MEDICINE, ed. by *Henry N. Wagner, Jr.*, M.D. (Philadelphia, W. B. Saunders Company, 1968. $27.50).

MODERN TREATMENT, VOL. 4, NO. 6, TREATMENT OF OBESITY, ed. by *Charles A. Hollenberg*, M.D. and TREATMENT OF BURNS, ed. by *Charles L. Fox, Jr.*, M.D. (New York, Harper & Row Publishers, November, 1967. $16.00 per year).

DRUGS OF CHOICE 1968-1969, ed. by *Walter Modell*, M.D. (St. Louis, C. V. Mosby Company, 1967. $17.75).

PROGRESS IN NEUROLOGY AND PSYCHIATRY, VOLUME XXII, ed. by *E. A. Spiegel*, M.D. (New York, Grune & Stratton, Inc., 1967. $19.75).

New Head of Radiology at U. of I.



The appointment of Dr. James H. Christie, of Cleveland, as professor and head of radiology at the U. of I. College of Medicine, was approved by the Board of Regents on January 11. He will join the faculty in Iowa City on July 1.

As head of the Department of Radiology, Dr. Christie will succeed Dr. Eugene F. VanEpps, who resigned his executive duties last year, though he has continued as a professor. Dr. Howard B. Latourette is serving as acting head.

Dr. Christie took his bachelor of science at Franklin and Marshall College, Lancaster, Pennsylvania, in 1942, and his doctor of medicine at Western Reserve University in 1945. He received his specialty training at University Hospitals of Cleveland, and was made a diplomate of the American Board of Radiology in 1953. He joined the faculty at Western Reserve immediately thereafter. He is a trustee of the Society of Nuclear Medicine.

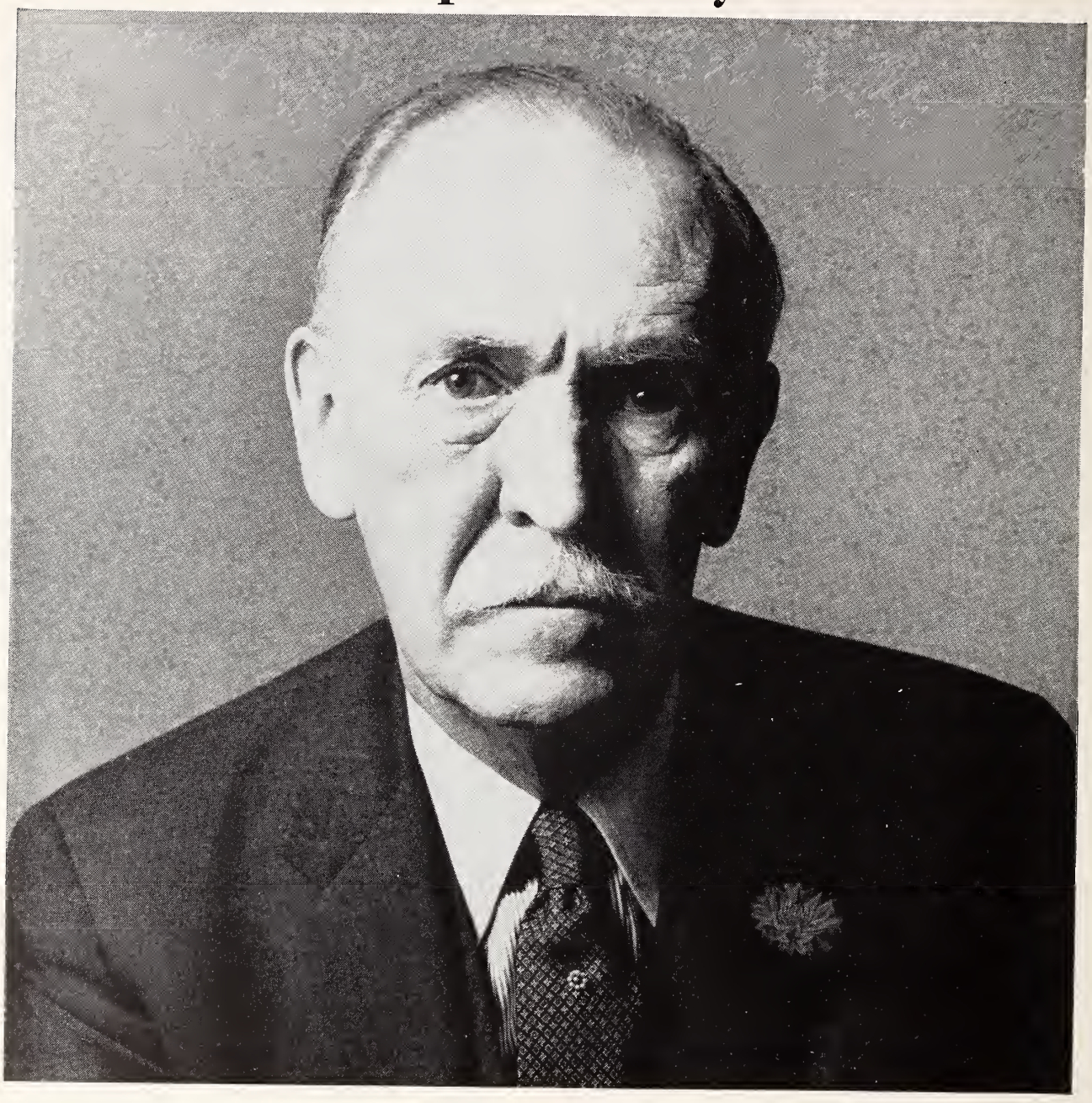
Please Mark Your Calendar

IMS ANNUAL MEETING

April 28-May 1

Hotels Savery and Fort Des Moines
Des Moines

Help the Needy!



A patient of advancing years may appear to "have everything," but may well be in need—*medically*. You know the symptoms. He's tired most of the time. Though there's nothing wrong with him organically, he suffers from general malaise. Lassitude has become his way of life . . . vague aches and pains his major concern.

Such a patient has entered the "Mediatric Age"—that stage of his life in which he's an ideal candidate for MEDIATRIC. This preparation provides the anabolic benefits of gonadal steroids, plus a gentle mood uplift and the nutritional support he's apt to need. MEDIATRIC is intended to help keep him more alert and active, and relieve general malaise . . . to help restore that sense of physical and emotional well-being that the elderly *deserve* to enjoy.

The estrogen component in MEDIATRIC is PREMARIN® (conjugated estrogens-equine), the orally active, natural estrogen so widely prescribed for its physiologic and metabolic benefits. The combination of estrogen and *methyltestosterone* can help maintain anabolic balance to forestall premature degenerative changes related to estrogen deficiency. MEDIATRIC also supplies a small amount of *methamphetamine HCl* to provide a gentle mood uplift, and nutritional supplements specially selected to meet the needs of the aging.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.
WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.
SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.
SUGGESTED DOSAGES: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.
In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.
SUPPLIED: No. 752—MEDIATRIC Tablets, in bottles of 100 and 1,000.
No. 252—MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.
No. 910—MEDIATRIC Liquid, in bottles of 16 fluidounces and 1 gallon.

	Each MEDIATRIC Tablet or Capsule contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC Liquid contains:
Conjugated estrogens-equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
Pyridoxine HCl	3.0 mg.	—
Calcium pantothenate	20.0 mg.	—
Ferrous sulfate exsiccated	30.0 mg.	—
Ascorbic acid	100.0 mg.	—
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And there's an added advantage: the usual dosage is just 1 tablet once or twice daily, often without need for supplementary therapy. (BUTISERPAZIDE provides not only hypotensive and diuretic action, but a mildly sedative effect as well.) Isn't this the way to take the suffering out of hypertension?

You have a choice of 2 strengths:

Butiserpazide®-25
Prestabs®* Tablets

BUTISOL® (butabarbital) 30 mg. (½ gr.)†;
Hydrochlorothiazide 25 mg. (⅜ gr.); Reserpine 0.1 mg.

in mild to moderate cases, often effective at half the usual thiazide or thiazide/reserpine dosage.

Butiserpazide®-50
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BUTISOL® (butabarbital) 30 mg. (½ gr.)†;
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controls many moderate to severe cases without any need for ganglionic blockers, or other more potent agents; if such agents are needed, their dosage can be cut in half.

*15 mg. of **Butisol** (butabarbital), plus the other ingredients, in outer layer; 15 mg. of **Butisol** (butabarbital) in a specially coated core for delayed action, to approximately equalize duration of action for all components.

Contraindicated in presence of renal impairment, peptic ulcer, ulcerative colitis, or mental depression, and in patients with porphyria or those sensitive to any component. **Warning:** Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions which have led to obstruction hemorrhage, and perforation. Surgery has been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occur. **Precautions:** Exercise caution in hepatic disease, diabetes, surgery, coronary artery disease, epilepsy, E.S.T., and in patients receiving digitalis. **Side Effects:** Electrolyte imbalance, hyponatremia, hypochloremic alkalosis and/or hypokalemia, hyperuricemia and gout, bradycardia, drowsiness, skin rashes, hangover, systemic disturbances, weakness, leg cramps, diarrhea, epistaxis, dizziness, urticaria, dry itching skin, nausea, vomiting, palpitation, superficial skin bruises, headache, dehydration, paresthesias, photosensitivity, pancreatitis, jaundice, xanthopsia, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, nasal congestion, hypotension, lassitude, loose stools, anorexia, bizarre dreams, peptic ulcer, ulcerative colitis, mental depression. (Ammonium chloride, which may be administered to reverse hypochloremic alkalosis, should not be given to patients with hepatic disease.) **Before prescribing or administering, see package insert.** †**Warning:** May be habit forming. **Usual Adult Dosage:** Butiserpazide®-25 or Butiserpazide®-50: 1 tablet daily or b.i.d.

References: 1. Johnson, H. J., Jr.: Penna. M. J.: **67**:35, 1964. 2. Coodley, E. L.: Curr. Ther. Res. 4:460, 1962.

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University Hospitals DRUG LETTER

Coumarin Anticoagulants

K. L. WALGREN, M.D.

The discovery of the coumarin anticoagulants dates to the early 1920's when Schofield (1924) described "Sweet Clover Disease" in the cattle herds of the northern United States and southern Canada. The disease is characterized by severe internal hemorrhage occurring in animals fed for prolonged periods on improperly cured clover fodder. Roderick (1931) identified the abnormality as hypocoagulability of the blood and determined the clotting defect to be hypoprothrombinemia. He also demonstrated that the severity of the bleeding tendency was proportional to the degree of prothrombin deficiency. Both Roderick and Schofield recognized the hemorrhagic state could be reversed either by withdrawal of the offending feed or by the transfusion of fresh whole blood. Extensive investigation into the disease was carried out at the University of Wisconsin, and in 1939 the active principle was isolated, crystallized and identified as 3,3-methylenebis-(4-hydroxycoumarin) or dicoumarin.

This work was paralleled by the development of one-stage prothrombin time by Quick which proved to be a convenient and simple method of controlling oral anticoagulant therapy.

MODE OF ACTION

Coumarin and indandione derivatives are quite similar in their actions, but do vary in their time of onset, duration of action and side effects. These differences are compared in the accompanying table.

Oral anticoagulants have no effect *in vitro* and exert their influence on the coagulation system only *in vivo* and after a latent period of several hours. They inhibit the liver synthesis, not only of prothrombin, but also factors VII, IX, and X. These factors are vitamin K-dependent, and the administration of vitamin K reverses the effect of the coumarin drugs. It is now understood that the one-stage prothrombin time is more sensitive to the levels of factors VII and X than to prothrombin. Following administration of a coumarin anticoagulant, the levels of factors VII and X fall more quickly than those of factor IX and prothrombin, presumbly secondarily to their shorter half-life in the circulation. Factor VII is essential for the extrinsic but not the intrinsic clotting systems, so it is understandable that severe bleeding could be encountered in the first few days of coumarin therapy from factor VII deficiency, and that at the same time the Lee-White clotting time could be perfectly normal.

Coumarin inhibition of prothrombin synthesis in the liver has been clearly demonstrated (Barnhart, 1962). The mechanism by which the circulating levels of the other coagulation factors are depressed is less clearly understood. It is likely that a block in the synthesis of a common protein precursor is involved. The several factor deficiencies occurring with coumarin therapy are used by Seegers (1962) to substantiate his theory that not only thrombin but also factors VII and IX are fragments of the prothrombin molecule. Although evidence has been advanced showing that coumarin reduces the adhesiveness of platelets, decreases the clot-forming properties of the vascular endothelium and increases the rate of recanalization of thrombosed segments of blood vessels, the use of these drugs must still be considered empirical and their use justified on the basis of clinical trials.

FACTORS INFLUENCING DRUG ACTIVITY

Individual sensitivity to drugs of the coumarin type is a very real problem. The clinician must insure that the patient clearly understands the dosage to be taken, that there is ready access to a capable laboratory and that careful follow-up is possible. The patient should be cautioned to be prompt in reporting any untoward symptoms or even the slightest indication of bleeding.

Several additional factors directly influence the intensity and the duration of the anticoagulant activity of dicoumarin. Coumadin derivatives act by antagonism of vitamin K. Deficiency in the dietary intake of the vitamin of abnormalities in vitamin K-absorption will influence the response to the drug. Vitamin K is a fat-soluble vitamin, and its absorption parallels that of dietary lipids. Debilitated patients, patients with liver or pancreatic disease and newborn infants are particularly sensitive to dicoumarin. Renal insufficiency, febrile states and active tuberculosis occasionally exaggerate the response. Bacterial flora of the intestine provide an important source of vitamin K, and

Dr. Walgren is an assistant professor of internal medicine at the U. of I. College of Medicine. This article appeared initially in the December, 1967, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. Materials from DRUG LETTER are reprinted here at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors.

DOSES AND DURATION OF ACTION OF THE ORAL ANTICOAGULANT DRUGS

Drugs	Registered Names	Average Dose, mg. Initial: 1st Day	2nd Day	Maintenance	Average Time After Administration for Prothrombin Time, Hr. To Increase to Twice the Control-Value*	To Return to Normal
Bishydroxy-coumarin (dicoumarol, dicoumarin)	Dicumarol	300	200	25-100	48-96	48-96
Phenindione	Hedulin, Dindevan, Danilone, Trombantin	200	100	50-150	30-48	48-72
Ethyl biscoumacetate	Tromexan, Pelentan	900-1800	300-1800	100-500	24-36	24-48
Phenprocoumon	Marcoumar	20-30	none	3-6	48-72	90-110
Warfarin sodium	Coumadin sodium, Athrombin, Marevan	40 (i.v. or oral)	15 (oral)	5-15 (oral)	30-48	72-110
Nicoumalone	Sintrom	16-28	8-16	2-10	36-48	49-60

* Ideal therapeutic levels are generally considered to be a prothrombin time of from 2 to 2½ times the control value, or using saline diluent, a prothrombin level of 25 per cent.

prolonged use of antibiotics or sulfa drugs can increase the sensitivity to oral anticoagulants. Lactating women may be insensitive to dicoumarin, as are individuals receiving quinidine or barbiturates.

Salicylates and phenylbutazone are examples of drugs which also may interfere with normal hemostasis and therefore should be used with caution, if at all, in patients receiving oral anticoagulants.

TOXIC EFFECTS

Anorexia, nausea, vomiting and diarrhea are occasionally encountered during therapy with dicoumarin. They are rarely troublesome, and their relationship to the dicoumarin therapy has not been well defined. Bleeding is the outstanding toxic effect of oral anticoagulants, and it may occur in spite of usual doses of the drug and a prothrombin time which is within the therapeutic range. Bleeding is usually from mucous membranes, skin, gastrointestinal and gastrourinary tracts. The most common bleeding difficulty is hematuria. This is rarely fatal and not usually followed by a decrease in renal function. Intracerebral hemorrhage is extremely common in dicoumarin-treated patients who have subacute bacterial endocarditis.

It should again be emphasized that patients on oral anticoagulant therapy must be followed closely for the development of any bleeding tendency or for evidence of any disorder, such as peptic ulcer, which might constitute a bleeding hazard.

The treatment of hemorrhage involves immediate withdrawal of the anticoagulant and the administration of vitamin K_1. In the case of a severe hemorrhagic state, fresh blood or plasma should be transfused immediately.

The development of a hypercoagulable state from the administration of an excess of Vitamin K_1 has not been clearly demonstrated. It is quite likely that reversing the effects of oral anticoagulants reestablishes the patient's liability for thromboembolic complications which existed before the anticoagulant was given.

THERAPEUTIC USES OF ORAL ANTICOAGULANTS

It has been shown by several studies (Ingram 1961, Douglas 1962) that oral anticoagulation reduces the incidence of thromboembolism, particularly as related to postoperative and recumbency thrombosis. The use of oral anticoagulants in arterial-insufficiency syndromes has not resulted in a clearly defined reduction of morbidity or mortality and, therefore, their use is questioned. There is no good evidence that oral anticoagulants decrease the immediate mortality after acute, massive myocardial infarction, but the incidence of thromboembolism during the recuperative period is probably reduced. The occurrence of emboli associated with rheumatic heart disease is a major

indication for long-term anticoagulant therapy, and treatment is so successful that prophylactic therapy should be considered.

Each clinical situation, however, represents an individual and unique problem, and each case must be decided on its own merits.

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Douglas, A. S.: Anticoagulant Therapy. Oxford, Blackwell Scientific Publications, 1962.

Summer Clinics of Children's Hospital, Denver

Children's Hospital, Denver, will hold its Summer Clinics at Vail, Colorado, June 26-28. The guest faculty is to include Virginia Apgar, M.D., of The National Foundation; Louis K. Diamond, M.D., of Harvard; Robert G. Frazier, M.D., of the American Academy of Pediatrics; Harry Medovy, M.D., of the University of Manitoba; and Paul Wehrle, M.D., of the University of Southern California.

The seminars and lectures will occupy the mornings only. Thus the program provides an opportunity for a family vacation in the Rockies. The fee is $40, and advance registration is essential because the enrollment will be limited. Address: Department of Continuing Education, Children's Hospital, Nineteenth Avenue at Downing, Denver 80218.

Twelfth Annual Pediatric Conference

Raymond Blank Memorial Hospital

Des Moines

The following program, with the exception noted, will be held in the Ralph L. Jester Auditorium of the Iowa Methodist School of Nursing, Pleasant Street and Eleventh, on Thursday and Friday, April 18 and 19, under the sponsorship of the Raymond Blank Hospital Association, the Raymond Blank Hospital Guild, the Division of Maternal and Child Health of the State Department of Health, and the Iowa Chapter of the American Academy of Pediatrics. Registration for the entire conference is $30, and that fee includes two luncheon tickets and a banquet ticket.

Thursday, April 18

9:15 a.m. "Treatment of Convulsive Disorders by Drugs, Diet and Surgery," The Twelfth Lee Forrest Hill Lectureship—Haddow M. Keith, M.D., emeritus professor of pediatrics, Mayo Clinic and Mayo Graduate School of Medicine, University of Minnesota, Rochester

10:30 "Specific Language Disability (Dyslexia) as a Cause of Scholastic Failure"—Thomas E. Cone, Jr., M.D., professor of pediatrics, Harvard Medical School, Boston

11:15 "Mental Retardation, Choreoathetosis and Selfmutilation Associated With Hyperuricemia: Description and Experience With This New Syndrome"—William M. Mitchener, M.D., assistant professor of pediatrics, University of New Mexico, Albuquerque

12:00 m. LUNCHEON

1:00 p.m. BUSINESS MEETING, IOWA CHAPTER OF THE AMERICAN ACADEMY OF PEDIATRICS

2:30 CASE PRESENTATIONS BY BLANK HOSPITAL RESIDENTS—Dr. Hill, moderator

4:15 "Clinical Pharmacology, a Pediatric Frontier"—Harry C. Shirkey, M.D., professor of pediatrics, Medical College of Alabama, Birmingham

6:30 SOCIAL HOUR AND BANQUET—Wakonda Club, 3915 Fleur Drive
"The Artist Looks at the Child"—Dr. Cone

Friday, April 19

9:00 a.m. "Adverse Reactions to Drugs: Their Relation to Growth and Development"—Dr. Shirkey

9:45 CASE PRESENTATIONS BY BLANK HOSPITAL RESIDENTS—Dr. Hill, moderator

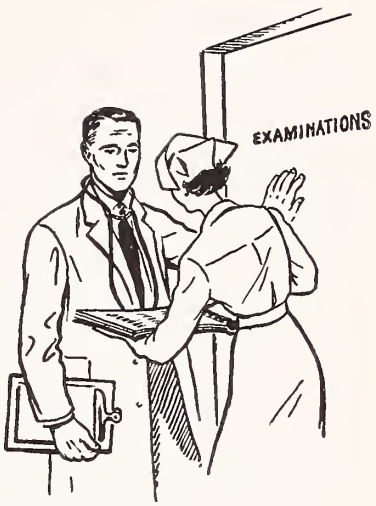
11:15 "A Study Center for Retarded Children in a Rural Setting in Minnesota"—Dr. Keith

12:00 m. LUNCHEON

1:45 p.m. "Ulcerative Colitis in Children: Diagnosis and Management"—Dr. Michener

3:00 "Some New Syndromes in Pediatrics"—Dr. Cone.

THE DOCTOR'S BUSINESS



Practice Management—What Is It?

LARRY E. LEAVERTON
Des Moines

We still hear the cliche that physicians are poor businessmen. We even hear some doctors boasting about it. The statement has a variety of meanings —some intended to be complimentary and others not. The truth is that there are still many physicians who do not give the proper time and attention to the management of their practices. It is easy for a physician to convince himself that he is too busy to be concerned with the details of practice management. However, it is often the *neglect* of those business details that has made him so busy. Perhaps he has not taken time to study and analyze his practice from an objective viewpoint.

What is practice management? Management is frequently defined as "getting things done through people." To accomplish it, a physician must be a good supervisor in his relationships with his employees, and he must use consultants—medical, legal and business—whenever necessary. Much like the practice of medicine, the complex world of business is becoming specialized. Professional advice should be sought on a business or a legal problem, just as one would seek advice on a medical problem.

Some of the aspects one finds in a well managed practice are:

1. *A well located and well designed office, having a layout that is comfortable for the patient and convenient for the doctor, and decorated in good taste.*
2. *The best available personnel*—efficient and well trained—who will assume responsibility.
3. *Modern systems and routines* to keep pace with changes.
4. *A reasonable and realistic fee schedule.*
5. *A workable appointment system* tailored to the needs of that particular office, designed to suit the convenience of both the patient and the doctor or doctors.
6. *Complete and adequate records* to reflect the financial position of the practice and to fu'fill tax purposes. Good financial data provide information needed for proper management of the financial affairs of the practice. You must have adequate financial information if you are to make sound business decisions. You should be concerned with the costs of operating your office. Much has been said and written about rising medical fees. Do you know the percentage increases in your office overhead that occurred just within the last year? Or in the last five years? Are you making progress financially? How does your progress compare with that of others, on the basis of statistical information available?
7. *Good internal control.* Internal control, simply stated, means the control of cash in your office. The increased volume of transactions caused by increased patient loads makes this imperative.
8. *A good relationship with referring doctors, the hospitals and the community.* Reports, insurance forms and other information are given promptly and cheerfully.

If the physician is in a partnership or group practice, the practice-management problems are similar but on a broader plane. More persons are involved in making decisions and setting policy. One of the commonest problems in partnership practice is in the area of communications between the partners and with the employees. When there are several partners, it is necessary to have meetings to resolve problems before they become magnified. As with other businesses or professions, the success or failure of a medical group will depend on its management.

The doctor's "image" is tied in a considerable extent to the way he manages his practice. Poor business practices are often at the bottom of complaints from patients. Good practice-management is in the best interest of both the patient and the physician. A well-managed practice generally means well-satisfied patients.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

March Medical Meetings in Sioux City

The Sioux Valley Medical Association, the Iowa Heart Association and the Woodbury County Medical Society are presenting meetings in Sioux City in mid-March. On March 14 The Sioux Valley Medical Society is to conduct a program for physicians at the Sheraton Warrior Motor Inn, and the Iowa Heart Association will offer a simultaneous program for nurses at the Sheraton-Warrior Hotel. The Friday and Saturday programs, for both doctors and nurses, will take place at the Sheraton-Warrior Hotel.

The registration fee for the Heart Association's program is $10, and the attendance will be limited to 300 doctors and nurses. Thus, advance registration is advisable. Address the Northwest Division, Iowa Heart Association, 1319 South Patterson, Sioux City 51106. Presumably the annual membership fee will be asked of the physicians who attend the Sioux Valley Association's session.

March 14 (Thursday)

Sioux Valley Medical Association
Sheraton-Warrior Motor Inn

(Physicians' Program)

1:30 p.m. "Approach to Heart Disease in Infants"—R. E. Durnin, M.D., assistant professor of pediatrics, U. of I. College of Medicine

2:00 p.m. "Pulmonary-Function Studies in the Office"—N. G. Hepper, M.D., head, Pulmonary Disease Section, Mayo Clinic, Rochester

2:45 p.m. "Evaluation of Murmurs in School-Age Children"—Dr. Durnin

3:15 p.m. "Respiratory Failure"—Dr. Hepper

3:45 p.m. QUESTIONS AND ANSWERS

6:00 p.m. SOCIAL HOUR AND DINNER
"Regional Medical Programs," Willard A. Krehl, M.D., coordinator of the Iowa Regional Medical Program

Iowa Heart Association
Cotillion Room, Sheraton-Warrior Hotel

(Nurses' Program)

9:30 a.m. "Normal Anatomy and Physiology of the Circulation"—E. W. Scheldrup, M.D., professor of anatomy, U. of I. College of Medicine

12:00 m. LUNCHEON

1:30 p.m. "Pathology of the Circulation"—Dr. Scheldrup

3:15 p.m. QUESTIONS AND DISCUSSION

6:00 p.m. SOCIAL HOUR AND DINNER (Joint dinner with Sioux Valley Medical Association. See above.)

March 15 (Friday)

Iowa Heart Association
Ballroom, Sheraton-Warrior Hotel

(Nurses and Doctors)

9:00 a.m. "Diagnosis of Arrythmias"—E. O. Theilen, M.D., professor of medicine, U. of I. College of Medicine

11:30 a.m. PANEL DISCUSSION OF ARRYTHMIAS—Edward Genton, assistant professor of medicine, University of Colorado, and Dr. Theilen

12:00 m. LUNCHEON

1:00 p.m. "Aggressive Management of Cardiac Arrest"—Dr. Genton

2:00 p.m. "Coronary Care Units"—Herbert Bessinger, M.D., clinical assistant professor of medicine, University of Illinois College of Medicine

3:30 p.m. "Electronic Pacing"—Dr. Genton

4:30 p.m. PANEL

6:00 p.m. Social Hour, sponsored by Woodbury County Heart Association

March 16 (Saturday)

Iowa Heart Association
Ballroom, Sheraton-Warrior Hotel

(Nurses and Doctors)

8:00 a.m. "Congestive Heart Failure"—Francois Abboud, associate professor of medicine, U. of Iowa College of Medicine

9:00 a.m. "Cardiogenic Shock"—Dr. Bessinger

10:30 a.m. "Adrenergic Receptors"—Dr. Abboud

Postgraduate Course on Fractures and Other Trauma

From April 17 to 20 the Chicago Committee on Trauma will present its Twelfth Postgraduate Course on Fractures and Other Trauma at the John B. Murphy Memorial Auditorium, 50 East Erie Street, Chicago. It is open to all doctors, and the $80 registration fee covers a reception and one luncheon, as well as admission to the lectures.

The types of injuries discussed will include abdominal, thoracic, genitourinary, ophthalmic, neurosurgical and vascular, as well as musculoskeletal.

The speakers will include Dr. Patrick J. Kelly, of the Mayo Clinic; Dr. J. William Fielding, of New York City; Dr. Adrian E. Flatt, of the U. of I. College of Medicine; Dr. Francis C. Jackson, of Pittsburgh; and Dr. Paul M. James, of Philadelphia. Faculty members from all five of the city's medical schools will also participate.

For further information, write James P. Ahstrom, Jr., M.D., chairman, Twelfth Postgraduate Course, American College of Surgeons, 55 East Erie Street, Chicago 60611.

Iowa Association of Medical Assistants

ABC's for the Medical Assistant: Avoid Bungling Casualties!

The physician would do well to allocate duties to his medical assistant in the light of her education and experience. Though the assistant is responsible and liable for her own negligence and outright mistakes, the physician is also responsible for them.

The woman in the white uniform is often referred to as "the office nurse" even though she may be a secretary or receptionist with no training or experience in the nursing field. Thus under the impression that her white dress means something, the patient may request assistance from her that is far above her capability. With training and experience, and with direction from her employer, the medical assistant will come to know what she may or may not attempt, and she will be prepared to do a good job of every task permitted her.

The medical assistant should know that while she is working in the doctor's office her legal status is that of an employee. Whatever she does for the patient is part of the doctor's service and treatment. He has the right as well as the responsibility to direct and control her in the performance of her duties. As her employer, the doctor is liable under the doctrine of "respondeat superior" for any harm to patients arising out of her neglect or carelessness.

Patients seem to expect that "the woman in white" can efficiently observe and relay their symptoms to the doctor. If a doctor chooses to employ a "woman in white" who lacks training that would enable her to recognize danger signals and emergencies, to know when immediate care is needed, and to provide it until the doctor arrives, he may be exposing his patients to serious risks.

Here are some ABC's for the medical assistant to consider:

1. Do you check the label on the bottle *twice* before filling a syringe?
2. Do you write down all of the phone numbers of the patients whose phone calls the doctor must return?
3. Do you check your spelling of the diagnosis whenever you file a report or claim? (E.g., there is a difference between *Acholosis* and *Alcoholism!*)
4. Do you always remember to ask the patient whether he is allergic to eggs before administering a vaccine prepared on chick embryo?
5. Do you *really* check urine specimens, or merely "sink test" them?
6. Do you double check your unusual lab findings?
7. Do you check the dates regularly on all immunization materials?
8. Do you promptly order vitally needed drugs for your supply cabinet, so that you will always be prepared?
9. Have you ever told an inquiring friend, over the bridge table, about the condition of one of your employer's patients?

Would you be justified in:

1. Okaying a prescription?
2. Prescribing medication?
3. Removing foreign bodies (splinters) from fingers?
4. Giving medical information over the phone?
5. Releasing medical information to a member of your family?
6. Removing sutures without orders?
7. Giving physical therapy?
8. Applying medications and bandages?

All of these seem like simple questions, yet many women, after years of employment in a medical office assume such responsibilities having to do with patients' welfare and health.

It is in this regard that each employee might consider taking a refresher course—through home study or through attending symposiums conducted for the purpose of alerting her to dangers to which she may have become insensitive.

Check your ABC's! You too may need refreshing about your legal responsibilities to patients, to your employer and to yourself.

—Marian Little

A Refresher Course Will Be Offered At

THE IAMA ANNUAL CONVENTION

Holiday Inn, Sioux City

May 4-5

Mark your calendar!

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Mumps Vaccine

A live attentuated mumps virus vaccine* has recently become available for general use. It is, therefore, appropriate to describe the circumstances under which this vaccine may be considered for use.

Mumps, one of the common communicable diseases, is observed with greatest frequency in young school-age children. However, approximately 15 per cent of reported cases occur after the onset of puberty. Overt evidence of central nervous system disease with sequelae is rare, although meningeal involvement appears to be common. Orchitis has been reported in up to 20 per cent of the clinical mumps cases occurring in post-pubertal males. Symptomatic involvement of other glands and organs is observed less frequently.

All naturally-acquired mumps infections—including the estimated 30 per cent of cases that are subclinical—confer durable immunity.

Live mumps vaccine is prepared in chick embryo cell culture. It produces an inapparent, noncommunicable infection following administration. Febrile reactions and mumps-like symptoms have not been associated with the vaccine.

More than 95 per cent of susceptible vaccinees develop detectable antibodies after vaccination, although titers are lower than those induced by natural infection. The pattern of antibody persistence parallels that seen following clinical mumps, but at a lower level. The persistence of antibodies is unknown at the present time. Individuals have been observed for only two years following vaccination because the vaccine is a recent development.

Excellent protection against naturally occurring mumps has been documented in vaccinees for the first year after vaccination. Limited data on natural exposure during the second year indicate continuing protection.

RECOMMENDATIONS FOR VACCINE USE

Live mumps vaccine may be considered for use in children approaching puberty, in adolescents, and in adults, especially males, if they have not had mumps.† The vaccine is not specifically contraindicated for younger children, but until more information is available on the duration of immunity, the vaccine is not recommended for routine use. Furthermore, mumps immunization should not be allowed to compromise the effectiveness of public health programs of already established importance.

Age. Live mumps vaccine should not be administered to children less than 12 months of age because of the possible persistence of interfering maternal antibody.

High Risk Groups. Epidemic mumps can be particularly disruptive to normal routine in large groups of susceptible individuals. Children living in institutions, for example, might benefit from vaccination against the disease.

Prevention of Natural Mumps Following Exposure. Adults and adolescents who are susceptible to mumps by clinical history present a perplexing medical problem when exposed to mumps.‡ It is not now known whether live mumps vaccine will provide protection when administered after exposure. There is, however, no contraindication to its use at that time.

PRECAUTIONS IN USING LIVE MUMPS VACCINE

Severe Febrile Illnesses. Vaccination should be postponed until the patient has completely recovered.

Marked Hypersensitivity to Vaccine Components. Mumps vaccine is produced in chick embryo cell culture and should not be given to persons hypersensitive to ingested egg proteins. Also, the vaccine contains small amounts of neomycin, and it should not be given to individuals known to be sensitive to this antibiotic.

Leukemia, Lymphomas, and Other Generalized Malignancies. Theoretically, attentuated mumps virus infection might be potentiated by other severe underlying diseases, such as lymphomas and generalized malignancies.

Altered Resistance From Therapy. Steroids, alkylating drugs, antimetabolites, and radiation

* Official name: Mumps virus vaccine, live.

† The single individual dose recommended by the manufacturer should be employed.

‡ Inactivated mumps vaccine and mumps hyperimmune globulin are of questionable effectiveness under these circumstances.

may predispose to untoward complications as a result of altered resistance.

Pregnancy. Mumps virus infection is not known to exert any untoward effects on the developing fetus. It is reasonable on theoretical grounds, however, to avoid using the live mumps vaccine during pregnancy.

SIMULTANEOUS ADMINISTRATION OF LIVE MUMPS VACCINE WITH OTHER ANTIGENS

So that the live mumps vaccine may be evaluated adequately, its simultaneous administration with other vaccines should be deferred until results of controlled clinical investigations are available. Until then, it is recommended that mumps vaccination be separated from other immunization procedures by about one month, whenever possible.

Careful surveillance of mumps is particularly important now that an effective vaccine is available. There is a need for improved reporting of mumps cases, complications of cases, patterns of vaccine use, effectiveness of vaccine after exposure to natural infection, and general vaccine performance. These data will help to delineate the epidemiologic characteristics of the disease and to define future use of the vaccine.

Bodies for Scientific Purposes

The shortage of human bodies for anatomical study is acute in Iowa. Medical schools in the state estimated their need at 125 bodies for teaching purposes during 1966. However, only 39 bodies were available to the schools. This is a relatively small number when one considers that approximately 29,000 Iowans died during that period.

Prior to the 1930's, unclaimed bodies of indigents supplied most of the needs of the medical schools. With the passage of social welfare legislation, provisions were made for the burial expenses of most indigents.

Iowa law does require that bodies be made available for scientific purposes under certain conditions. The law covers all persons who die in public institutions in Iowa or who are to be buried at public expense, with the exception of those receiving Old Age Assistance. The bodies referred to in the law are to be turned over to the approved Iowa medical schools, unless there is a request from the individual or a relative specifically seeking burial. The law requires that the State Department of Health shall receive notification of every such death and shall arrange for these bodies to be equally distributed among the schools.

The schools now depend in great part on bodies deeded to them. Of the 39 bodies available for anatomical study last year, 28 were willed to the schools. Iowa is one of 28 states with laws that provide for deeding bodies to medical institutions. The school assumes responsibility for transporatation, memorial service, if desired, and a funeral director's fee for handling the body. At the conclusion of scientific study, the remains are disposed of with dignity and according to the individual's own instructions or those of his survivors.

Persons interested in deeding their bodies to science should contact officials at the University of Iowa College of Medicine at Iowa City, or the College of Osteopathic Medicine and Surgery, in Des Moines.

Morbidity Report for Month of January, 1968

Diseases	1968 Jan.	1967 Dec.	1967 Jan.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	536	662	413	For the state
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	23	52	166	Blackhawk, Carroll, Scott
Whooping Cough	10	11	1	Cedar, Lyon
Brucellosis	1	6	5	Linn
Chickenpox	792	825	730	For the state
Meningococcal meningitis	1	3	2	Lee
Mumps	1827	2122	269	For the state
Poliomyelitis	0	0	0	
Infectious hepatitis	33	44	23	For the state
Rabies in Animals	16	13	16	For the state
Malaria	0	6	1	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	10	17	24	For the state
Syphilis	49	62	65	For the state
Gonorrhea	271	351	243	For the state
Histoplasmosis	4	3	4	Adams
Food intoxication	0	0	0	
Meningitis (type unspec.)	5	1	2	Adams, Cherokee, Crawford, Pottawattamie
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	1	0	
Salmonellosis	4	9	3	Polk, Webster
Tetanus	0	0	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	0	
H. influenza meningitis	1	0	1	Dubuque
Amebiasis	4	1	1	Dallas, Pottawattamie
Shigellosis	8	13	7	Blackhawk, Dubuque, Linn, Polk, Webster
Influenza	5412	657	0	For the state

Spring Professional Program

The Ellis Fischel State Cancer Hospital
and
Cancer Research Center
Columbia, Missouri

Saturday, April 6, 1968

9:00 a.m. INTRODUCTORY REMARKS—Kenneth M. Endicott, M.D., director, National Cancer Institute, Washington, D. C.

9:10 a.m. "The Philosophy and Rewards of Cancer Detection"—Emerson Day, M.D., director, Strang Cancer Detection Center, New York, New York

9:50 a.m. "Potential Adverse Effects of Cancer Detection"—John S. Spratt, Jr., M.D., director, Cancer Research Center, Columbia, Missouri

10:50 a.m. "An Economic Appraisal of Cancer Detection"—Francis R. Watson, Ph.D., biostatistician, Cancer Research Center, Columbia, Missouri

11:30 a.m. "A Statistical Evaluation of Recurrent Cancer Examinations"—Thomas L. Lincoln, M.D., The Rand Corporation, Santa Monica, California

12:00 m. LUNCHEON

1:00 p.m. "Oral Cytology"—N. H. Rowe, Jr., D.D.S., Washington University School of Dentistry, St. Louis

1:20 p.m. "The Gastric Camera"—Walter L. Trudeau, M.D., Washington University School of Medicine, St. Louis

1:40 p.m. "Automated Pulmonary Cytology"—Melvin P. Ehrlich, president, Nuclear Research Associates, Inc., New Hyde Park, New York

2:00 p.m. "Cervical Cytologic Sampling of Puerto Ricans"—Jean Ubinãs, M.D., radiotherapist, Nuclear Center, San Juan, Puerto Rico

2:20 p.m. "The Endometrial Brush"—David G. Hall, M.D., professor of Obstetrics and Gynecology, University of Missouri School of Medicine

2:40 p.m. "An Integrated Cancer Detection System"—Galen B. Cook, M.D., Cancer Research Center, Columbia, Missouri

3:00 p.m. TOUR OF DETECT MOCK-UP

4:00 p.m. DEDICATION OF CANCER RESEARCH CENTER BUILDING NO. 1—Kenneth M. Endicott, M.D., W. C. Whitlow, LL.B., and John S. Spratt, Jr., M.D.

5:00 p.m. RECEPTION

Accredited by the Academy of General Practice.

Summer Camp for Diabetic Children

The Summer Camp for Diabetic Children will be conducted for the twentieth year under the auspices of the Diabetes Association of Greater Chicago from July 14 through August 4, 1968, at Holiday Home, Lake Geneva, Wisconsin. Boys and girls from eight through thirteen years of age are eligible.

As in previous years, the camp will be staffed by resident physicians, a nurse, dietitians and laboratory technicians, in addition to the regular counseling and domestic staff of Holiday Home. Rates for Summer Camp are arranged in accordance with individual circumstances. Applications may be obtained from, and inquiries directed to: Diabetes Association of Greater Chicago, 620 North Michigan Avenue, Chicago, Illinois 60611, 943-8668.

Course for Board Candidates in Obstetrics and Gynecology

A refresher course for board candidates in obstetrics and gynecology will be held at the Marquette School of Medicine, in Milwaukee, March 18-22. It will duplicate the Emil Novak Memorial postgraduate course given each fall for the past nine years at Johns Hopkins School of Medicine.

The Marquette course, given by both Marquette and Johns Hopkins faculties, is intended to meet the increased registration demands. The fall course will continue taking place in Baltimore. Each session is limited to 100 registrants. It is a widely-inclusive presentation suited for any gynecologist or pathologist who wants a rapid and up-to-date résumé of gynecology, and the pathology, cytogenetics and endocrinology of the female reproductive system.

Inquiries should be addressed to the Office of Continuing Education, Marquette School of Medicine, 561 North Fifteenth Street, Milwaukee 53233. The enrollment fee of $200 covers five days of instruction and microscopic slides of gynecologic lesions.

Symposium on Fetal Medicine at the U. of Wisconsin

The Department of Pediatrics at the University of Wisconsin College of Medicine will present a symposium on fetal medicine on April 4, 5 and 6, at the Wisconsin Center, on the university campus in Madison.

The program will cover structural, biochemical, endocrine and genetic aspects of fetal frowth and development, fetal diagnosis, fetal and maternal interrelationships, and extrauterine adaptation. The guest speakers will include Drs. Frederick Battaglia, Edward Hon, Robert Greenberg, Thomas K. Oliver and Alex Robertson.

For further information, address Thomas C. Meyer, M.D., associate dean, Department of Postgraduate Medical Education, 333 North Randall Avenue, Madison 53706.

Short Courses of the University of Colorado

The University of Colorado School of Medicine announces a four-day postgraduate course in obstetrics and gynecology to be held at the Stanley Hotel, in Estes Park, Colorado, June 17-20. The course is designed primarily for the obstetrician-gynecologist, and topics to be discussed include fetal distress, uterine dysfunction, treatment of ovarian carcinoma, chemotherapy, management of ovarian masses, and the role of radical surgery for gynecological malignancies. Three eminent guest speakers will participate: Louis M. Hellman, M.D., Brooklyn; Charles A. Hunter, M.D., Seattle; and Richard F. Mattingly, M.D., Milwaukee.

Tuition and registration fees will be $80. For further information and a detailed program, write to the Office of Postgraduate Medical Education, University of Colorado School of Medicine, 4200 East Ninth Avenue, Denver 80220.

On July 8-11, the University of Colorado School of Medicine will present its fifty-fourth annual postgraduate course in ophthalmology at the Stanley Hotel, in Estes Park, Colorado. The faculty is to consist of Robert P. Burns, M.D., Portland, Oregon; Philip Knapp, M.D., and Harvey A. Lincoff, M.D., both of New York City; and J. Donald Gass, M.D., Miami. Tuition will be $80.

The detailed program will be available May 1. Address the Office of Postgraduate Medical Education, at the address given above.

Federal Money for State Medical Library

For a second year, the State Medical Library has received a $7,968 Medical Library Resource Grant from the HEW Department. It facilitates the purchase of additional book stacks and will help to pay for additional medical books and journals.

The State Medical Library is located on the second floor of the Historical Building, on East Grand Avenue opposite the State Capitol, in Des Moines. Physicians are encouraged to borrow materials from it, by requesting particular volumes or magazines or by asking for up-to-date information on medical problems of specific sorts.

Please Mark Your Calendar

IMS ANNUAL MEETING

April 28-May 1

Hotels Savery and Fort Des Moines

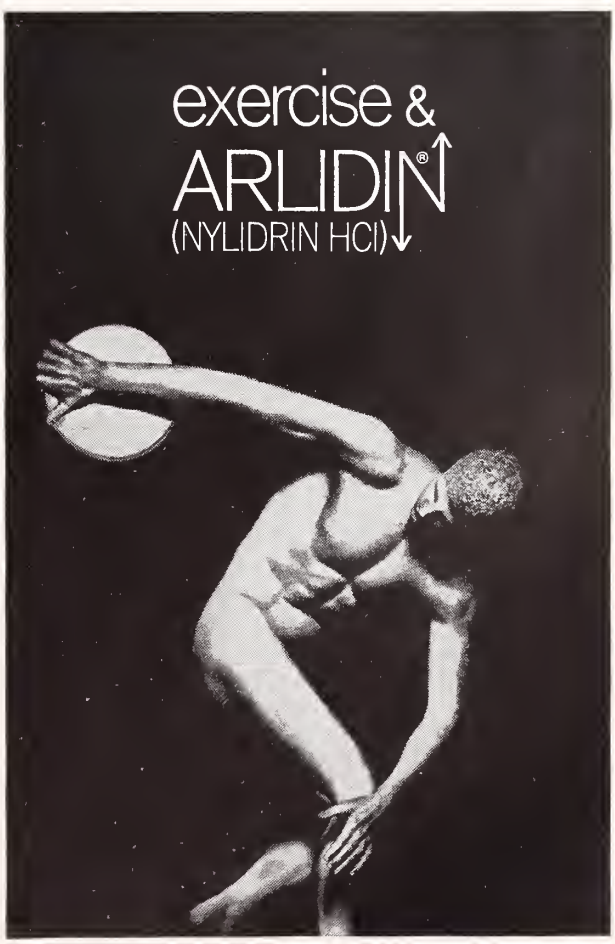
Des Moines

First International Symposium on Dextrans

The first International Symposium on Dextrans will be held at Galveston Island, Texas on Sunday and Monday, May 19 and 20, 1968. Entitled "Current Concepts of the Basic Actions of Dextrans and Their Clinical Application in the Cardiovascular and Related Fields," the symposium is co-sponsored by the Texas Heart Association, the Council on Circulation of the American Heart Association, the Postgraduate Education Division of the University of Texas Medical Branch, the University of Minnesota Medical School and the Georgia Institute of Technology—Biomedical Division.

Researchers from Europe and the United States who have carried out extensive research studies on the dextrans for 20 years or more will participate in this important two-day symposium. Program planners advise that the major emphasis of the symposium will be placed on the use of dextrans in the cardiovascular field.

Programs, advance registration, and hotel reservation forms for the Dextran Symposium may be obtained by writing or calling the Texas Heart Association, P. O. Box 25041, Houston, Texas 77005 —Area Code 713—JAckson 6-4194.



WOMAN'S AUXILIARY

to the

IOWA MEDICAL SOCIETY

1968 Annual Meeting, Des Moines

Program Theme: "Iowa's Focus on Values"

MRS. MAX E. OLSEN, *Presiding*

Sunday, April 28, 1968—Hotel Kirkwood

1:30 p.m. Registration for Board Members—Main Lobby

2:30 p.m. BOARD MEETING—Colonial Room

6:30 p.m. SOCIAL HOUR AND SUPPER (Dutch) for Board members, convention chairmen, husbands and special guests, at the home of Dr. and Mrs. Joseph Veverka

Monday, April 29, 1968—Hotel Fort Des Moines

8:00-9:30 a.m. REGISTRATION

8:00 a.m. CONTINENTAL BREAKFAST, courtesy Iowa Medical Society

9:00 a.m. The Honorable Gerald Ford, speaker. Joint meeting with Iowa Medical Society

9:30-10:00 a.m. Recess to Hotel Kirkwood

Monday, April 29, 1968—Hotel Kirkwood

8:00 a.m.-3:00 p.m. REGISTRATION—Main Lobby. Luncheon tickets available till 11:00

10:00 a.m. FORMAL OPENING OF THE 39TH ANNUAL MEETING. Capitol Room—Business session and reports

12:15 p.m. LUNCHEON—Marquette, Kirkwood, West Rooms. Honoring past presidents and 1967-68 board. All physicians' wives welcome
Skit, "Top of the Anatomy," and the "Plaid Lads." Entertainment
Speakers: The Honorable William Scherle and Jane Scherle, "A Freshman Looks at Congress"

3:00 p.m. Recess

NOTE: Free time until Tuesday a.m.

7:00 p.m. Dutch Treat Dinner for State Officers, Guests—National Representative, Out-of-State Presidents and Presidents-Elect

Tuesday, April 30, 1968—Hotel Kirkwood

8:00 a.m.-12:00 noon REGISTRATION—Main Lobby, Luncheon tickets available till 11:00

7:30 a.m. THE FIRST PAST-PRESIDENTS' BREAKFAST—Mrs. Max E. Olsen, hostess

8:00 a.m. AREA PLANNING SESSION. All Western Area physicians' wives are to attend. Mrs. Howard Ellis, presiding—West Room

8:00-8:45 a.m. Continental breakfast—Capitol Room

9:00 a.m. CALL TO ORDER, SECOND SESSION OF 39TH ANNUAL MEETING—Capitol Room
Business session and reports
Memorial service

12:15 p.m. Luncheon—for all physicians' wives. Honoring National Representative, retiring president and Auxiliary guests
"The Grandview Singers"—Entertainment
Presentation of Volunteer Health Service Award
Speaker: Mrs. C. C. Long, Ozark, Arkansas, National President-elect
Installation of Officers
Inaugural Address—Mrs. J. F. Bishop
Presentation of Past-President's Pin—Mrs. R. E. Hines
Adjournment

2:30 p.m. 1968-69 BOARD MEETING—Colonial Room. Mrs. J. F. Bishop, presiding

6:00 p.m. Iowa Medical Society's President's Reception. Hotel Fort Des Moines

7:00 p.m. Iowa Medical Society Banquet. Hotel Fort Des Moines

"M.D."

When Daddy signs his name
He always writes "M.D."
That's so the people all will know
That he belongs to me.

So M.D. means "My Daddy"
Or something just the same
And that is why he always
Puts those letters on his name.

Some letters in his name are small,
But these are not, you'll see.
He always writes them big like that
Because he's proud of me!

Gavel Gabble

Greetings to every member of the Woman's Auxiliary to the Iowa State Medical Society! Your convention hostess and I extend a most cordial invitation to ALL doctors' wives in Iowa to join us at the annual state convention at the Hotel Kirkwood in Des Moines, on April 28, 29 and 30.

At this time it seems there are not enough hours in any of my days so that I can do all the things that I would like to do as your president. I have enjoyed the county visits more than anything else, and wish I could get to all of your meetings. I now realize that many of you are much too modest in your reports each year, and that we don't hear of all the fine things many of your members accomplish. Lasting impressions of originality and variety will always stay with me when I remember the meetings and good times I have shared with you in your localities.

I am anxious that every member-at-large in our state will feel especially needed and welcome at our state meeting this year. We would like to honor you in some way—those of you who live in areas where there is no organized Auxiliary, but are interested enough in your husband's profession, in its problems, and ideals—yes, the members-at-large. There will be a drawing each day, and one of you will be selected to sit at the speaker's table as an honored guest.

The county presidents' reports are due on March 1. I sent you state chairmen your report forms last fall, and I shall want them as soon as you can complete them. Of course, you know you will have to get your letters out to the county chairmen now, in order to get the answers back in time to fill out your own reports. You all have been great to work with this year, and I know you won't let me down now.

I do hope that all you really gracious hostesses whom I stayed with during my county visits will be at the Monday luncheon, for there will be a small gift of appreciation for each of your homes.

Here are some easy ways to kill an organization without really trying:

1. Miss as many business meetings as possible.
2. When you do go, find fault.
3. Decline offices or appointments to committees.
4. Get angry if you aren't nominated or appointed.
5. After you have been named, don't attend board or committee meetings.
6. If you do get to one, keep quiet till it is over, and then sound off on how things really should be done.
7. Do no work unless necessary. When the Old Reliables pitch in, accuse them of being a clique.
8. Oppose all banquets, parties, and planned entertainments as being wastes of the members' money.
9. If everything is strictly business, complain that the meetings are dull, and that the officers are trying to run everything.
10. Never accept a place at the head table.
11. If you aren't asked to sit there, threaten to resign because you aren't appreciated.
12. Don't rush to pay dues. After all, you didn't write the budget.
13. Read mail from headquarters only now and then, and don't reply if you can help it.

Perhaps these are a bit exaggerated, but do let us chuckle over some problems that are sure to arise in most large organizations.

See you April 28-30!!

ELAINE OLSEN, *President*

News From Around the Hawkeye State

Marion County

The Woman's Auxiliary to the Marion County Medical Society began its fall meetings in September. Clay Barnett, chief of police in Knoxville, was the guest speaker at the October meeting. He explained the need for a community center there. At that meeting the Auxiliary presented a gift of money to the "Befriendess Club" to be used for their crafts project at the County Home.

The November meeting was held at the Pine Knolls Country Club. Mrs. Max E. Olsen, the State Auxiliary president and Mrs. Joseph F. Veverka, the district counselor, were honored guests. Mrs. Veverka spoke on IMPAC. Takaski Kume, a Rotary Club exchange student from Hiroshima, showed pictures and costumes, and explained the customs of his native land.

In December, the Auxiliary members were guests of the Medical Society at the Pine Knolls Country Club. Each of the ladies received a gift. The program was provided by Dr. and Mrs. D. A. Mater who showed pictures of their European trip to the Rotary International Convention.

At the January meeting, plans were discussed for helping with the polio immunization clinic that was to be held at the Knoxville Public Schools February 2, 1968. Reports were given on the program for collecting soap to be sent to International Health. Condolences were sent to Mrs. F. P. Ralston following the sudden death of Dr. Ralston, on January 20, 1968. A memorial in his name was sent to AMA-ERF.

Polk County

A luncheon sponsored by Polk County Medical Society for foreign students interested in medical and paramedical careers was held Saturday, February 3, at Hotel Kirkwood, Des Moines. Auxiliary members joined Polk County doctors as hosts to seven foreign students who are attending high school and college in Iowa.

The Polk County Volunteer Health Service Award was presented to Mrs. Sam Caligiuri, of Des Moines, for her service at Veterans Hospital. She has given over 2,500 hours of service and has helped plan the in-service training program at Veterans Hospital. She was presented as Woman of the Year to the Auxiliary on February 9, at Hoyt Sherman Place, by Mrs. Glen Nielsen.

Wapello County

The Woman's Auxiliary to the Wapello County Medical Auxiliary held a tea, January 20, for the Future Nurses Club of Ottumwa High School. The film "Legacy of Hope" was shown. The film about the ship *Hope* was shown to stress international health, and point out that there are more than 200 health career opportunities. Young women belonging to the future nurses clubs buy their own uniforms and work as volunteers, part of a day each week, at either of the two Ottumwa hospitals. This past year they sold Christmas wreaths to raise funds for a field trip in the spring, and netted a little over $50. There are about 25 members in the club.

AMA-ERF Awards

This year the AMA-ERF county achievement awards are to be given on an entirely new basis. The awards will be earned on a *per capita* rating. The size of the Auxiliary will make no difference. Your Auxiliary, whether it has five or fifty members, will stand an equal chance.

Last year Iowa gave $2.61, on a per capita basis —fourth from the bottom. I think we can do better. Here are some suggestions on how it can be done.

AMA-ERF has made available to us, free of charge, attractive memo pads that we are to sell for fifty cents each or three for a dollar. Let's make it our goal to place a memo pad beside every telephone in every member's home. These, along with the note paper that we are familiar with, can be obtained by writing to Mr. Jack Cassurella, 535 North Dearborn, Chicago, Illinois 60610.

Spring is not too far away, and with it comes spring house cleaning and a great opportunity to move some of the unused clothing, toys, etc. in an Auxiliary rummage sale. It's a sure fire way of making money.

Black Hawk County now has a telephone committee that contacts members regarding meetings, and the postage saved thereby is donated to AMA-ERF. A great idea!

Share your money-making ideas with us! Let's improve our standing over last year's.

BERNIS WICKS (MRS. RALPH)
Chairman, AMA-ERF

It's a Bargain! "MD's Wife"

If you have not already done so, please be sure and look at the January 1968 issue of MD'S WIFE. On the back cover, the "Classics Club" has a real bargain. For only $1.00 you can receive beautiful library editions of three great books: "Five Great Dialogues," by Plato, "Meditations" by Marcus Aurelius, and "On Man and Universe" by Aristotle. The Classics Club will pay our National Auxiliary $3.00 for each reply using the coupon in the ad on the back cover of the magazine.

Volunteer Health Service

Attention all County Presidents! If you have someone from your community whom you wish to nominate for this year's "Volunteer Health Service Award," be sure and send your entries in by the first of April. Please send them to The Woman's Auxiliary Advisory Committee, 1001 Grand Avenue, West Des Moines, Iowa 50265.

AMA-ERF Fund Raising Projects

Note Paper
Playing Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036
or
Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322



Personals



Dr. S. M. Haugland, of Lake Mills, instructed firemen, ambulance and rescue squad personnel, and various other people in mouth-to-mouth resuscitation, at the City Hall, there, January 22. The mannikin "Resusci Anne" and a training film were used. The meeting was sponsored by the Winnebago County Heart Unit.

At a meeting of the Henry County Nurses Association, on January 15, **Dr. Mary Couchman** spoke on blood dyscrasias. She conducts a general practice in Mt. Pleasant.

Dr. Eugene Wagner, of Plainfield, has given up the practice of medicine because of his poor health, according to the January 18 issue of the FREDERICKSBURG NEWS.

The 1968 officers of the medical staff at Northwest Hospital, Franklin Avenue and Forty-eighth Street, Des Moines, are **Dr. James R. Bell,** chief, succeeding **Dr. Alfred N. Smith; Dr. Charles R. Peterson,** vice-president; and **Dr. Harold E. Eklund,** secretary-treasurer.

At a meeting held at the Hotel Fort Des Moines to organize an Iowa chapter of the American College of Surgeons, on January 24, **Dr. Ralph A. Dorner,** of Des Moines, was chosen as its first president; **Dr. William A. Baird,** of Ames, was named vice-president; **Dr. David Culp,** of Iowa City, secretary-treasurer; and **Drs. Cyrus L. Beye,** Sioux City, **Louis Alt,** Dubuque, and **Arthur H. Downing,** Des Moines, councilors.

The Iowa Heart Association conducted a one-day seminar for clergymen, on February 6, at Wartburg College, in Waverly, on pastoral care for the aging and chronically ill. **Dr. W. A. Tice,** a Waterloo psychiatrist, discussed emotional needs associated with aging; **Dr. H. W. Rathe,** of Waverly, talked on behavior changes associated with aging and chronic illness; and **David Belgum, D.D.,** of the U. of I. School of Religion, spoke on expectations of pastoral care for the aging and their families.

Dr. E. A. Rogers, who has practiced in Anamosa, is to become director of medical education at Baptist Hospital, Nashville, Tennessee.

Dr. Paul Guggenheim, who has practiced otolaryngology in Council Bluffs for 15 years, left there on February 1 for the San Francisco Bay area. He is to head the ear, nose and throat department at the Kaiser Permanente Hospital in Redwood City, and to teach his specialty at Stanford University Medical School, in Palo Alto.

At a meeting of the Dallas-Guthrie Medical Society, in Stuart on January 25, **Dr. Chester Woodburn,** of Des Moines, discussed plastic surgery.

More than 300 people attended a "Meet the Author" open house held to honor **Dr. Faye Lewis,** on Sunday, January 28, at the Kendall Young Library in Webster City. Her newest book, PATIENTS, DOCTORS AND FAMILIES, was published just a few weeks ago. She had written a column for the WEBSTER CITY FREEMAN JOURNAL in the late '30s and early '40s, and an earlier book, DOC'S WIFE.

Dr. Dale Christensen, of Lake City, was reelected president of the Calhoun County Medical Society at a meeting held on January 17. Also reelected were **Dr. John Faust,** of Manson, vice-president, and **Dr. C. A. Cardenas,** of Lake City, secretary-treasurer.

On January 23, the Clear Lake Lions Club heard **Dr. James Hendricks** discuss his service in Vietnam with the AMA Volunteer Physicians program.

Dr. E. M. Eneboe, of Hawarden, attended the week-long General Practice Review at the Univer-

sity of Colorado Medical Center, in Denver, in mid-January.

Dr. William Bockoven, an Ames psychiatrist, was elected president of the Iowa Association for Mental Health, Inc., at the organization's annual meeting in Waterloo on January 30. The president's term of office is two years.

The Junior Chamber of Commerce at Maquoketa has presented a distinguished service award to **Dr. O. L. Franks,** who has practiced in the community for 49 years. Besides practicing medicine, he is a member of the Maquoketa City Council.

Some 335 junior and senior high school students heard discussions of "Problems of Maturity" on January 17 at Storm Lake. **Dr. Beryl Michaelson,** of Humboldt, lectured to the girls, and **Dr. R. E. Mailliard,** of Storm Lake, to the boys. Afterward, sex education was discussed at a meeting for parents.

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine, is the author of a new book entitled RARE DISEASES AND LESIONS: THEIR CONTRIBUTIONS TO CLINICAL MEDICINE published by Charles C Thomas, Springfield, Illinois. The book takes up a vast number of disorders, from barber's pilonidal cyst, leprechaunism, maple-bark disease, restless legs and stiff-man syndrome, to Whipple's disease. It includes an essay on the naming of diseases, listing dozens of naming schemes ranging from Arabic words to zoology, from architecture to war, from chaos to noises, and from religion to slang.

Dr. Frederick C. Blodi, head of ophthalmology at the U. of I. College of Medicine, was elected secretary-treasurer and a trustee of the American Association of University Professors of Ophthalmology, at the organization's annual meeting in Phoenix late in January. He is also a member of the American Board of Ophthalmology, a representative for ophthalmology in the scientific exhibits section of the AMA, an instructor for the American Academy of Ophthalmology and Otolaryngology, and a lecturer and resident consultant to the Armed Forces Institute of Pathology.

Drs. James M. Tierney, of Carroll, and **Edward J. Hertko,** of Des Moines, represented the Iowa Society of Internal Medicine at a regional meeting of the American Society of Internal Medicine, in Phoenix, on February 3 and 4. The gathering was for the purpose of discussing the impact of federal programs on medical practice and medical education.

★

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- EQUAL BENEFITS AVAILABLE FOR WIVES (NOT INCLUDING THE PERMANENT TOTAL DISABILITY BENEFIT)
- FULL CHOICE OF BENEFICIARY AT ANY TIME
- TRANSFER OF OWNERSHIP OF POLICIES FOR ESTATE TAX ADVANTAGES

LOOK AT THESE SPECIAL LOW ANNUAL PREMIUM RATES INCLUDING PERMANENT TOTAL DISABILITY BENEFITS

PRINCIPAL SUM	ANNUAL PREMIUMS PER PHYSICIAN	ANNUAL PREMIUMS PER WIFE
$ 25,000	$ 25.00	$ 22.50
$ 50,000	$ 50.00	$ 45.00
$ 75,000	$ 75.00	$ 67.50
$100,000	$100.00	$ 90.00

THE PERMANENT TOTAL DISABILITY BENEFIT

If injuries, commencing within 30 days after an accident cause continuous total disability for one year (that is, complete inability to perform every duty of your occupation) and if you are then judged to be permanently and totally disabled (unable to engage in any occupation suitable to your education, training or experience, for the rest of your life) you will be paid the Principal Sum, less any amount paid or payable for dismemberment or loss of sight.

This presentation is not intended to provide all information of this insurance. Full details are contained in the Individual Policies which will be sent to any Doctor for examination and consideration without cost or obligation.

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In a lecture to the high school students in Saydel, a community bordering Des Moines, January 26, **Dr. Howard Latourette,** a U. of I. radiologist, showed that among 90 to 95 of every 100 men who come to his attention as patients, and who have been heavy smokers, 50 will have inoperable lung cancer and their life expectancies will average four months. Among the remainder, the cancers will be resectable in no more than 30. Of the 100 men, he said that perhaps eight will be alive five years later. He reported seeing between 60 and 80 cancer patients per day.

Dr. A. W. Horsley, of Sioux City, addressed a meeting of the Woodbury County Pharmaceutical Association, January 18, at the Jackson Hotel there. His topic was the value of the American Heart Association to the community and the latest developments in the treatment of heart disease.

Dr. Mark D. Pabst joined the staff of the Gilfillan Clinic, in Bloomfield, on February 1. His boyhood home was in Albia, he took his M.S. at the U. of I. College of Medicine in 1962, he interned at Broadlawns-Polk County Hospital, Des Moines, he served a residency in pediatrics at Iowa City, he was in Army uniform for the next two years at Ft. Eustis, Virginia, and since then he has practiced his specialty in Sioux City. He was made a diplomate of the American Board of Pediatrics last August.

The new officers of the medical staff at Iowa Lutheran Hospital, Des Moines, are **Dr. William C. Shinkle,** president; **Dr. Verne L. Schlaser,** president-elect; **Dr. V. G. Parson,** secretary; and **Dr. D. D. Schmitt,** treasurer.

On January 22, at a meeting of the Rosary Society of the Protivin Holy Trinity Parish, near Cresco, **Dr. Robert Dolan,** of Decorah, talked on "The Effects of Alcohol on the Body and Problems Generated by Its Misuse."

Dr. Wayne Lee was elected president of the Burlington Hospital medical staff, at its annual meeting in January. **Dr. Austin Sandrock** is vice-president; **Dr. Herbert Tjaden,** secretary; and **Drs. John Foss, Harry Readinger** and **R. J. Rettenmaier,** members of the executive committee. Dr. Readinger practices in New London; the others, in Burlington.

Beginning next fall, each high school wrestler in Iowa will be examined by a physician, and the physician will determine the minimum weight at which the youth will compete. The change in

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regulations was voted unanimously, on January 20, by the Board of Control of the Iowa High School Athletic Association, meeting in Boone. The decision was said to comply exactly with a recommendation by **Dr. William D. Paul,** of the U. of I. College of Medicine.

Dr. Wallace Rindskopf, pathologist at Iowa Lutheran Hospital, was chosen president-elect of the Polk County Medical Society at the organization's annual meeting January 17 at the Savery Hotel. **Dr. William J. Morrissey** was installed as president for 1968. **Dr. Thomas D. Ghrist** was re-elected secretary-treasurer; **Drs. Marvin H. Dubansky** and **William R. Hornaday, Jr.,** trustees; and **Dr. John L. Fatland,** councilor. All of them practice in Des Moines.

Dr. Montague Lawrence discussed open-heart surgery at a meeting of the Rotary Club in West Liberty, early in January. He is a professor of thoracic surgery at the U. of I. College of Medicine.

Two Des Moines men have been named to one-year terms on committees of the American Academy of General Practice. **Dr. Donald H. Kast** was appointed to the insurance committee, and **Dr. Elmer M. Smith** to the family health care committee.

Dr. S. C. Bauserman has been elected president of the medical staff at Ottumwa Hospital, succeeding **Dr. Richard A. Hastings. Dr. D. D. Emerson** was elected vice-president, and **Dr. W. H. DeKraay** was reelected secretary.

At a PTA meeting in Nora Springs on January 17, **Dr. Gene M. Kuehn,** of Mason City, spoke on "Parents to Child on Sex." He showed a movie on the subject.

On January 17, **Dr. Addison W. Brown,** a Des Moines gynecologist who has been a longtime crusader for the American Cancer Society, Iowa Division, Inc., was in Spencer to explain to PTA members and the general public the dangerous link between smoking and cancer. The meeting was held at the Johnson school.

Dr. Elmer M. Smith, who resigned his position at medical director for the State Department of Social Welfare in January, to serve an 18-month term as a medical adviser for a Vietnamese project of the federal government's Agency for International Development, will retain his post as delegate to the AMA for the Iowa Medical Society.

Dr. Norman J. Siderius, of Waterloo, was the principal speaker at the graduation of 23 practical nurses at the Hawkeye Institute of Technology, there, on January 17. The program, originally under the management of the Waterloo Community School District, has been in operation since 1957, and this graduating class was its eleventh.

In an interview with a reporter for the CEDAR RAPIDS GAZETTE, on January 16, **Dr. Donovan F. Ward,** a Dubuque surgeon and a recent AMA past-president, offered 10 rules for people to follow in keeping their medical costs down: (1) Select a family doctor and stick with him. Changing doctors can mean duplication of costs for tests and diagnoses. (2) Don't wait too long to see a doctor. Emergencies almost always cost more than routine treatment. (3) Go to the doctor's office whenever possible. House calls are costly. (4) Use the telephone whenever possible. When a doctor becomes familiar with his patients, he can often do as much good for them on the telephone as in an office examination. (5) Buy good health insurance. And don't insist on first-dollar coverage. (6) Don't forget to take advantage of all legal tax deductions for medical expenses. (7) Never depend on patent medicines. (8) Follow your doctor's advice. (9) Have regular medical checkups, especially after the age of 35. (10) The most obvious rule of all is STAY HEALTHY!

Dr. Roy O. Sebek has been elected chairman of the St. Edmond Century Club, at Fort Dodge. Each of the members—more than 100 business and professional people—have donated $100 to be used in promoting activities at St. Edmond High School. The organization is a new one, and it is planned that the members will each pay a $100 "membership fee" each year.

In an interview with a reporter for the DES MOINES TRIBUNE, **Dr. Robert C. Hardin,** dean of the U. of I. College of Medicine, was asked to comment on a proposal by State Representative John Tapscott (Dem., Des Moines) for the Legislative Research Committee to study the possibility of establishing a branch of the College of Medicine in Des Moines. "My mind is open, at this point, on a branch school," he is reported to have said. "The big question is whether a greater output of physicians will result in improved delivery of health care services, particularly in rural areas."

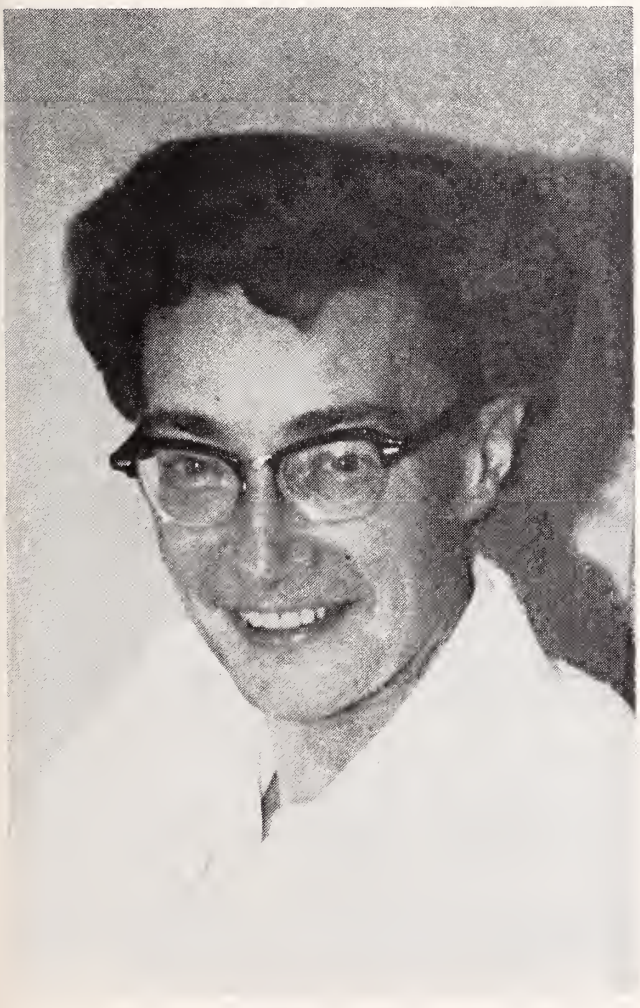
Presently, he was quoted as saying, 493 medical students are enrolled in Iowa City, and an ad-

ditional 300 are interning or in residency at University Hospitals. Next spring's graduating class will number 125, "the biggest we have ever had."

He was also reported to have said that a recent survey showed that half of all medical doctors practicing in Iowa are U. of I. College of Medicine graduates, and that 54 per cent of the practicing specialists in the state were trained in Iowa City.

The February 4 issue of the CEDAR RAPIDS GAZETTE contained a feature story on **Dr. Jean LePoidevin,** a Waterloo pediatrician. It mentions that she raises English cockers as a hobby, and currently is president of the Waterloo kennel club. She owns two champion dogs. Her other hobby, she says, is photography, "strictly the impulse type," and she does her own dark-room work. Though she is, herself, unmarried, Dr. LePoidevin said that the roles of physician and homemaker are by no means incompatible. She went on to say that doctor-mothers don't panic when they have occasion to treat their own children. "They know when to look for help, which is a big advantage."

Asked whether, if she had it to do over again, she would undertake a medical career, she was prompt in saying, "Yes." Then, commenting on medicine in general and pediatrics in particular, she said: "It is hard work, and it gets harder all the time—more people and fewer doctors—but it is still very rewarding and very stimulating. When you have accomplished something with a child, you have hopefully accomplished it for a good long period to come."



Dr. Jean LePoidevin

Dr. Don W. Chapman, a clinical professor of medicine at Baylor University, spoke on "Evaluation of Coronary Artery Disease" at the February 8 meeting of the Linn County Medical Society, at the Cedar Rapids Country Club. He is a 1939 graduate of the U. of I. College of Medicine.

Dr. Leonard Lackore, of St. Ansgar, left late in January to spend 60 days in Vietnam with the AMA Volunteer Physicians program. Last February he spent a month working with the Indians in Bolivia.

"Forensic Medicine for Wapello County" was the title of an address by **Dr. George M. Zimmerman,** an associate professor of pathology at the U. of I. College of Medicine, at the February 6 meeting of the Wapello County Medical Society, at the Ottumwa Country Club.

On January 31, **Dr. Clarence Denser, Jr.,** a Des Moines pathologist, discussed medical and paramedical careers at Saydel High School. On February 7, **Dr. Norman K. Rinderknecht,** a Des Moines gynecologist, showed the film "Investment in Life" and lectured to the students on "Advances in Research." On February 16, **Dr. Addison W. Brown,** also a Des Moines gynecologist, gave a "chalk talk" on "The Smoking Problem." Saydel High School has had health programs of these types for nine years. Cancer, venereal disease and alcoholism rotate as the general topics, year after year.

Samuel J. Fomon, M.D., a professor of pediatrics at the U. of I., is the author of a book entitled INFANT NUTRITION recently published by W. B. Saunders Company. The 299-page volume is intended for physicians, nutritionists and dietitians, and covers such topics as normal growth, failure to thrive, voluntary food intake and its regulation, vitamins, milk-free formulas, infant feeding in health and disease, and comments on the future of infant nutrition. Significant portions of the book are derived from research findings at the U. of I. Pediatrics Department's Infant Metabolism Unit, which dates from 1927.

The 260-member Dubuque County Firemen's Association proposed the establishment of a county-wide disaster plan, late in January. Central to the scheme is the emergency hospital that has been



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stored in the old Divine Word Seminary building at Epworth, and which could be set up within an hour in the event of a nuclear attack or natural disaster. **Dr. Louis P. Alt** and **Dr. Roger A. Ott,** Dubuque physicians, said that the Dubuque County Medical Society would give its support to such an emergency hospital if the need should arise.

A 15-member panel of officials and firemen set up the following guidelines: (1) The sheriff's department should be notified first of any personal-injury accident outside the incorporated towns. (2) Officials at the scene of a disaster should summon the necessary ambulances. (3) Responsibility for notifying next-of-kin lies with a law-enforcement officer, and together with a clergyman he should notify the relatives in person. (4) If, for example, 30 students were injured in a school bus accident, the injured should be taken to several hospitals, because a single hospital could not handle all of the admissions promptly enough. (5) Iowa law requires that the names of students aboard a school bus shall be posted in the bus, near the driver, so that officials can determine who was aboard, in case of a serious accident that has made identification difficult. (6) Though the county attorney is the head of the law-enforcement department in each county, the sheriff, for all practical purposes, should take command because he has the power to seek assistance from the National Guard.

Dr. Michael Bonfiglio, a professor of orthopedic surgery at the U. of I. College of Medicine, resigned his post as Iowa City-Coralville school board member on January 31, giving illness as his reason. He described his ailment as a vascular insufficiency of a temporary kind, and said he had been advised to reduce his work schedule. He was taken sick while at a medical meeting in Chicago, a few days earlier, and was staying home, but he planned to resume teaching and attending patients at University Hospitals, on a part-time basis, the following week. He was in his fourth year on the board, and had served for two previous years on the Coralville school board before the districts were combined.

A new office building has been completed for **Dr. K. W. Caldwell,** in Montezuma.

Dr. F. C. Perkins, of Hedrick, who owns the 2,100-acre R and R Ranch near Fremont, will be one of a 30-member group that is to visit five South American countries this winter. The leader is **Mr. Tom Wichersham,** an Extension Division livestock specialist at Iowa State University, and the tour will leave Des Moines on February 9. Dr. Perkins raises Angus cattle and purebred Columbia sheep, and his ranch furnishes 12 ewes

annually to Iowa State University. He will have medical responsibility for the tour group.

Dr. Thomas L. Coriden, the Woodbury County medical examiner, was the guest speaker at the January 15 meeting of the Sioux City Home Economics Club. His topic was "Childhood Diseases—Teen-age Problems."

A shortage of local facilities for helping multiple-handicapped children was cited as Iowa's major deficit in community social responsibility by **Dr. John C. MacQueen,** director of the U. of I. State Services for Crippled Children. In addressing the Legislative Budget and Financial Control Committee, he advocated a system of multi-county facilities for the multiply handicapped. He said a youngster who is deaf and retarded, for example, is unlikely to receive adequate attention unless his problems are relatively moderate and he comes from a "reasonably affluent" urban family. The Committee will determine whether to recommend that the next General Assembly establish a central facility or adopt some other approach.

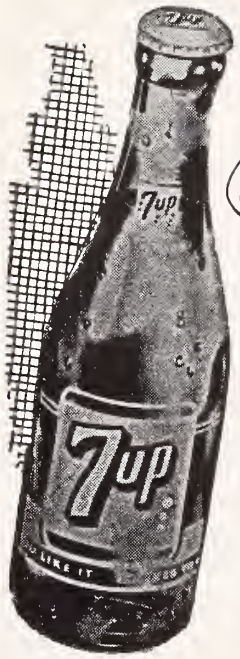
Speaking on the cultural impact of the American Negro, **Dr. Kingsley B. Grant,** an associate pathologist at St. Luke's Methodist Hospital and a member of the Cedar Rapids mayor's commission on human rights, pointed out that the 21,000,000 blacks in the United States are "the offspring of 20 slaves landed in Jamestown a full year before the landing of the *Mayflower,* which the D.A.R. and other ladies like to think of as the beginning of America."



He also said, "Those of us given the aspersion of 'white nigger' or 'Uncle Tom' are going to have to go to the brink, look down, and decide where our commitment lies. Standing alongside us on the brink, is the white liberal." He was a participant on January 15, in one of a series of programs on Negro heritage held at the Des Moines YMCA under the sponsorship of Progressive Young Negro Enterprises.

Dr. James Mincks, who returned to Bloomfield in December after working for two months as a staff member of *SS Hope* in Cartegena, Colombia, told an audience at the First Methodist Church in his home town on January 10 that he had spent about half his time at the medical school of the university there, which he said is about 50 years "behind the times." Poverty and ignorance, he declared, are responsible for a large share of the Colombian health problems. Wealth is concentrated in two to three per cent of the population,

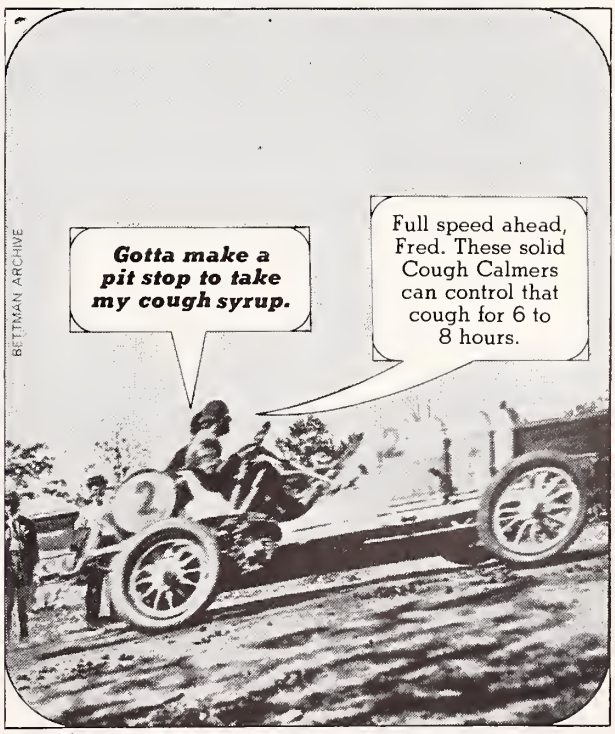
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and 75 per cent of the diseases are related to malnutrition. Fifty per cent of the deaths are in children under five years of age, and yet the population is expanding faster than the country's ability to produce food.

The medical profession in Colombia, he reported, does no research and ignores many of the basic problems. The doctors are more interested in dramatic things. One facility had a $25,000 x-ray machine, but no film. In a maternity ward it is not uncommon for three mothers to occupy a single bed. It also is not uncommon for a woman to have been pregnant 20 times and to have delivered 15 babies.

When *SS Hope* moves on to another location, 21 of its staff members will stay in Cartagena for two or three years to carry on its work.

Dr. Fredrick C. Blodi, of the U. of I. Department of Ophthalmology, was one of the speakers at the annual meeting of the Iowa Ophthalmic Dispensers, Inc., on January 14, at the Fort Des Moines Hotel, in Des Moines.

At an assembly on December 21 the students at Clarinda High School heard a lecture on the uses and abuses of drugs and drug-addiction, by **Dr. Earl Zehr,** a local physician.

Dr. James Coffey, Dr. Francis Conway and **Dr. Carroll Sinnard** have a new medical office building in Emmetsburg. Its dimensions are 96 × 54 feet, and in addition to the usual consultation and examining rooms, waiting-room, x-ray facilities, etc., it contains an area for physical medicine, including whirlpool tanks, ultrasound therapy units, and physical-therapy treatment tables.

Dr. Jean Mauch Rickey, a 1967 graduate of the University of Oklahoma School of Medicine who is interning at the Cincinnati General Hospital, has arranged to start general practice next summer in Belmond. Dr. Rickey's husband, **Mr. Lowell V. Rickey,** has been a farmer and the couple were interested in coming to Iowa, in large measure, because it is an ideal place for him to resume his occupation.

The American Academy for Cerebral Palsy elected **Dr. Gerald Solomons,** director of the U. of I. Child Development Clinic, as its executive secretary at its annual meeting in San Francisco, December 9-14. He had served the organization as chairman of its audio-visual committee, and as a member of its scientific program and membership committees.

Dr. William B. Bean was the featured speaker at the George S. Kilkenny Memorial Clinic Day



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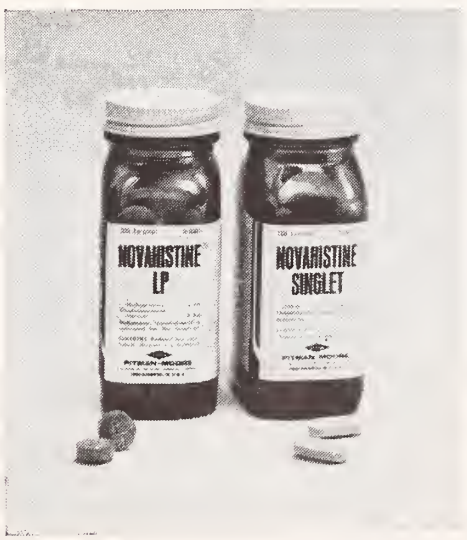
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at St. Joseph's Hospital, Milwaukee, on December 16. His topic was "William Osler and His Alter Ego, Edgerton Yorrick Davis."

Mr. John C. Peterson, of Hartley, a senior at the U. of I. College of Medicine, has been awarded a medical clerkship at the Radcliffe Infirmary of the United Oxford Hospital, at Oxford University. Based on clinical excellence, ward experience and total academic record, the four-month clerkship is one of the highest honors awarded by the College of Medicine. He and his wife left for England on February 5. He is the son of **Dr. and Mrs. John C. Peterson,** of Hartley.



Arnold M. Reeve, M.D., chief of preventive medicine in the State Department of Health, talked to the Wright County Medical Society, January 23, on the infectious hepatitis epidemic in Clarion, and the epidemiology of measles. The meeting was held in Holmes, Iowa.

Dr. Walter M. Block, a Cedar Rapids pediatrician, addressed a joint meeting of the Oxford District Medical Society and Teachers' Federation, late in January, in Woodstock, Ontario. His topic was "Description and Appraisal of the Doman-Delacato Method of Treating Brain-Injured Children," and the audience numbered about 750.

At the February 7 meeting of the Johnson County Medical Society, held at the University Athletic Club, **Dr. Albert S. Norris,** a professor of psychiatry at the U. of I. College of Medicine, spoke on "Research and Clinical Applications of LSD."

At the meeting of the Board of Regents on January 11, **Dr. Carroll B. Larson,** acting head of orthopedic surgery at the U. of I. College of Medicine was granted a year's leave of absence for study at the Shrine Hospital for Crippled Children in Chicago, and **Dr. Michael Bonfiglio** was named acting head during Dr. Larson's absence.

Six men have been appointed to a Joint Conference Committee of the AMA and the National Association of Blue Shield Plans which will undertake to resolve disagreements between state medical societies and their respective Blue Shields. **Dr. Herman J. Smith,** a Des Moines internist and an IMS delegate to the AMA, is one of the three members named by the AMA trustees.

Dr. R. R. Updegraff, of Des Moines, was one of about 40 specialists in plastic surgery of the head and neck who attended an advanced seminar on nose and ear procedures at the Cook County School of Medicine, in Chicago, January 21-26. It was sponsored by the American Academy of Facial Plastic and Reconstructive Surgery, Inc.

Dr. James E. Dyson, a longtime Des Moines pediatrician now retired and living in Phoenix, was one of several "Double D" alumni of Drake University who were honored at ceremonies in January. A member of the Drake class of 1913, he won his letter in track and since has distinguished himself as a physician. He was president of the Polk County Medical Society in 1942.

Dr. Rutledge C. Schropp, a Des Moines surgeon, has been appointed coordinator of the Area XI Community College training course on immediate care of the sick and injured that is especially designed for policemen, ambulance drivers and others who are likely to be called upon to care for the injured and the ill until a physician arrives.

The fourth in a series of programs sponsored by the Iowa Heart Association was presented over KDPS-TV, the television station of the Des Moines Public Schools, on February 1 by **Drs. Charles H. Gutenkauf** and **Dennis H. Kelly, Jr.,** internists. They reported on experience with the Coronary Care Unit at Iowa Methodist Hospital. Similar units were put into service at Mercy and Iowa Lutheran Hospitals, in Des Moines, on February 14.

Dr. Victor J. Cardenas, a Des Moines neuropsychiatrist, lectured to a meeting of directors of nursing education, held at the Story County Hospital, in Nevada, on January 25, about LSD and marihuana addiction.

On February 13, **Dr. Neal McGarvey** was the guest speaker at the monthly luncheon meeting of the Des Moines Life, Accident and Health Claim Association. His talk concerned utilization and fees. Dr. McGarvey practices internal medicine in Des Moines.

Dr. William I. Evans, who has been practicing radiology at Centerville, moved to Grinnell on February 10.

Dr. Lowell E. O'Connor, of Emmetsburg, has accepted the presidency of the newly-formed Palo Alto County Heart Unit.

During the first week in February, **Dr. Thomas E. Layman,** an assistant professor of internal medicine at the U. of I. College of Medicine, addressed the Kiwanis Club in Washington, Iowa. Some of Dr. Layman's research work in cardiology is supported by the Iowa Heart Association, and he spoke in support of the Heart Association's fund-raising campaign.

Dr. Larry W. Goetz, of Creston, participated in a presentation of "Immunization and Health Tips" to an adult evening class for farmers, at the Creston High School on February 5.

Dr. William M. Kelly has become associated with **Dr. Thomas L. Trunnell,** at Waterloo, in the practice of dermatology.

Two Cedar Rapids doctors who have participated in the Linn County Medical Society's cancer education programs for business and industry are **Dr. John Puk** and **Dr. Reid Motley.** Dr. Puk spoke at a meeting of Iowa Electric Light and Power Co. employees on February 9, and Dr. Motley addressed J. C. Penney Co. employees on February 17.

Dr. Charles F. Johnson, assistant medical director of the Child Development Clinic at the U. of I. Hospital School, attended a conference on phenylketonuria in Anaheim, California, early in February.

On February 8, **Dr. Craig D. Ellyson** addressed a PTA meeting at the Main Street Elementary School in Cedar Falls on the topic "Are Parents the Best Sex Educators?" Dr. Ellyson, a Waterloo physician, is chairman of the IMS Health Education Committee.

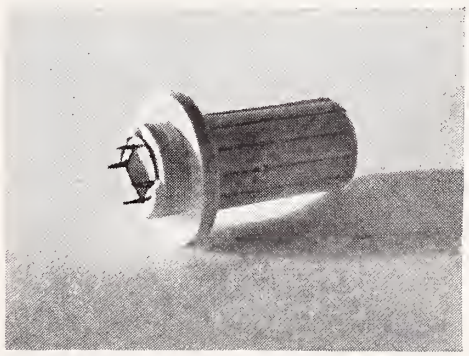
Dr. Judith Szentivanyi has joined the Cogley Clinic, in Council Bluffs, and will practice dermatology. She received her M.D. in Hungary in 1952, and since coming to this country has held a fellowship in allergy and has completed a residency in dermatology in Denver. Her husband is head of the Department of Microbiology at the Creighton University School of Medicine, and she too has joined the Creighton faculty. The couple has two children.

At the February 21 meeting of the Polk County Medical Society, held in the Ralph L. Jester Auditorium at the Iowa Methodist Hospital School of Nursing, Des Moines, **Dr. Panayotis Kelalis,** of the University of Minnesota's Mayo Graduate School of Medicine, in Rochester, lectured on "Misconceptions About the Prostate."

Dr. R. L. Mandsager, who joined **Dr. Donald S. Reading** in Marshalltown at the start of this year, addressed a meeting of alumnae of the Evangelical Hospital Nursing School, there, on February 6, describing his work as a medical missionary in the Cameroons, a country on the west coast of Africa. He took his M.D. at Iowa City in 1952, and after his internship and a year of surgical training, he and his wife went to Paris, and spent a year learning the French language there. They then went to the Cameroons, then a French protectorate. In all, they spent nine years there. They had the satisfaction of seeing the hospital facilities markedly im-

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proved and elementary education made generally available during their stay.

Dr. R. F. Frech was elected president of the Newton Country Club at the organization's annual meeting, February 6. It has been in continuous operation on the same site since 1915.

The 15 graduates of the Iowa City VA Hospital's Medical Technology School (1966-1967) passed the national certification examination conducted by the Board of Registry of Medical Technologists of the American Society of Clinical Pathologists. **Dr. Kenneth R. Cross**, director of the School, says that six (14 per cent) of them ranked in the top 10 per cent of all the people who took the test. Then in February they received their bachelor of science degrees at the winter graduation exercises of the U. of I. The 30 semester hours' work in medical technology is accepted by the University as the whole of their senior year's work. During their first three years at the University, the students must have earned 16 semester hours' credit, each, in chemistry and biology as prerequisites for entry into the School of Medical Technology.

On January 15 **Dr. Robert Sauer** dissolved his partnership with **Dr. Burns Byram,** in Marengo, and moved his practice to Preston, a southeast Minnesota county-seat town a few miles north of the Iowa border. He had been in Marengo for approximately three years.

The visiting-nurse service now underway in Poweshiek County, from an office located in Malcom, is to be expanded to serve Benton, Iowa, Poweshiek and Tama Counties. An organizational meeting was held on January 22, at which it was decided that its name should be "BIPT Health Services," though Iowa County (represented by the "I" in the name) isn't ready to take part. The 18-member board of directors that was appointed includes **Dr. William H. Steinbeck**, of Keystone, and **Dr. R. M. Carney**, of Brooklyn. **Dr. Glenn M. Dalbey**, of Traer, was appointed to the 11-member advisory board.

Dr. G. D. Button, of Conrad, spoke on home accidents at a meeting of the Beaman-Conrad Jaycettes on January 24.

Dr. A. B. Carstensen, of Linn Grove, a Life Member of the Iowa Medical Society, received broken ribs and face lacerations in a two-car automobile accident on Highway No. 71, Friday, January 26.

On February 1 **Dr. Ralph W. Bolton** began general practice at Forest City. He is a graduate of the Loma Linda University Medical School (formerly the College of Medical Evangelists), near Los Angeles. He served in the Marines before and during World War II; in fact he was aboard the light cruiser *Honolulu* when it was bombed in Pearl Harbor. The Boltons have seven sons and daughters. Their eldest daughter is a teacher; their eldest son is in the Army; a son and a daughter are attending high school in Walla Walla, and the three youngest are with their parents in Forest City.

Dr. James A. Mailliard, an Omaha internist, spoke, to the Kiwanians at Missouri Valley on February 6, at the invitation of **Dr. A. C. Bergstrom,** one of the local physicians. Dr. Mailliard discussed the fundamentals of the blood, heart and circulation.

The Iowa Medical Society held its Fourteenth Annual Senior Medical Student Conference at the University Athletic Club, in Iowa City, Saturday, January 27. The physician speakers included **Dr. C. E. Radcliffe**, Iowa City, the IMS alternate delegate to the AMA; **Dr. Richard F. Birge,** Des Moines, the IMS president; **Dr. Otis D. Wolfe,** Marshalltown, chairman of the Iowa Medical Political Action Committee; **Dr. R. D. Liechty,** Iowa City, a member of the IMS Committee on Legislation; **Dr. A. J. Havlik,** Tama, member of the IMS Committee on Public Assistance; **Dr. W. A. Krehl,** Iowa City, coordinator of the Iowa Regional Medical Program; **Dr. L. D. Caraway,** Monticello, and **Dr. T. D. Throckmorton,** Des Moines, members of the IMS Task Force on Medical Manpower; **Dr. J. C. MacQueen,** Iowa City, associate dean of the U. of I. College of Medicine; and **Dr. Cecil W. Seibert,** Waterloo, the IMS president-elect. **Mrs. Max E. Olsen,** of Minden, president of the Woman's Auxiliary to the IMS, spoke of the activities of her organization.

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Deaths

Dr. Furman P. Ralston, 69, a physician in Marion County for 40 years, died in his sleep at his home in Knoxville on Sunday morning, January 21, though he had seen patients in his office the day before. For five years before moving to Knoxville, he had practiced in Harvey. He was a graduate of the Drake University Medical School.

Dr. Charles Freeman Starr, 91, who retired in 1961 after serving Mason City as a general practitioner for 55 years, died at Memorial Hospital, there, on January 28. He was, successively, a sergeant and a second lieutenant during the Spanish-American War. Afterward, he attended medical school in Iowa City, and took his M.D. degree in 1906.

Dr. Kenneth H. Weaver, 65, who had practiced medicine at Union for 30 years, died at Evangelical Hospital, Eldora, on January 18, after an extended illness. He was a 1928 graduate of the U. of I. College of Medicine. Before moving to Union, he practiced in Williams and Ellsworth.

Dr. Paul C. Otto, 76, a retired Fort Dodge physician and surgeon, died on January 17 at Lutheran Hospital, there, two hours following his admission. He had suffered a heart attack at his home. He was a 1929 graduate of the University of Virginia Medical School, and besides his internship he served a year of a residency in obstetrics and gynecology. He engaged in general practice at Fort Dodge from 1932 to 1962. He planted and developed one of the largest apple orchards in the state, and after retiring from the practice of medicine, he directed the orchard activities.

Dr. Hamilton Bolstad, 83, of DeSoto, Wisconsin, who practiced in Boyden, Iowa, from 1915 to 1936, died at St. Francis Hospital, LaCrosse, on January 29. He was a 1913 graduate of the U. of I. College of Medicine.

Dr. Lysle H. Whitmer, 58, who practiced medicine in Wilton and Muscatine for many years, died on February 2 at his home outside Muscatine, after a long illness. He took his medical degree in 1934 at the University of Iowa.

Dr. Edward M. Honke, 58, who had practiced urology in Sioux City since 1938, died on February 9 in a hospital there, following a brief illness. He was a 1932 graduate of the Creighton University Medical School, and he took his residency training at the University of Pennsylvania. He was a former president of the Woodbury County Medical Society, and a diplomate of the American Board of Urology.

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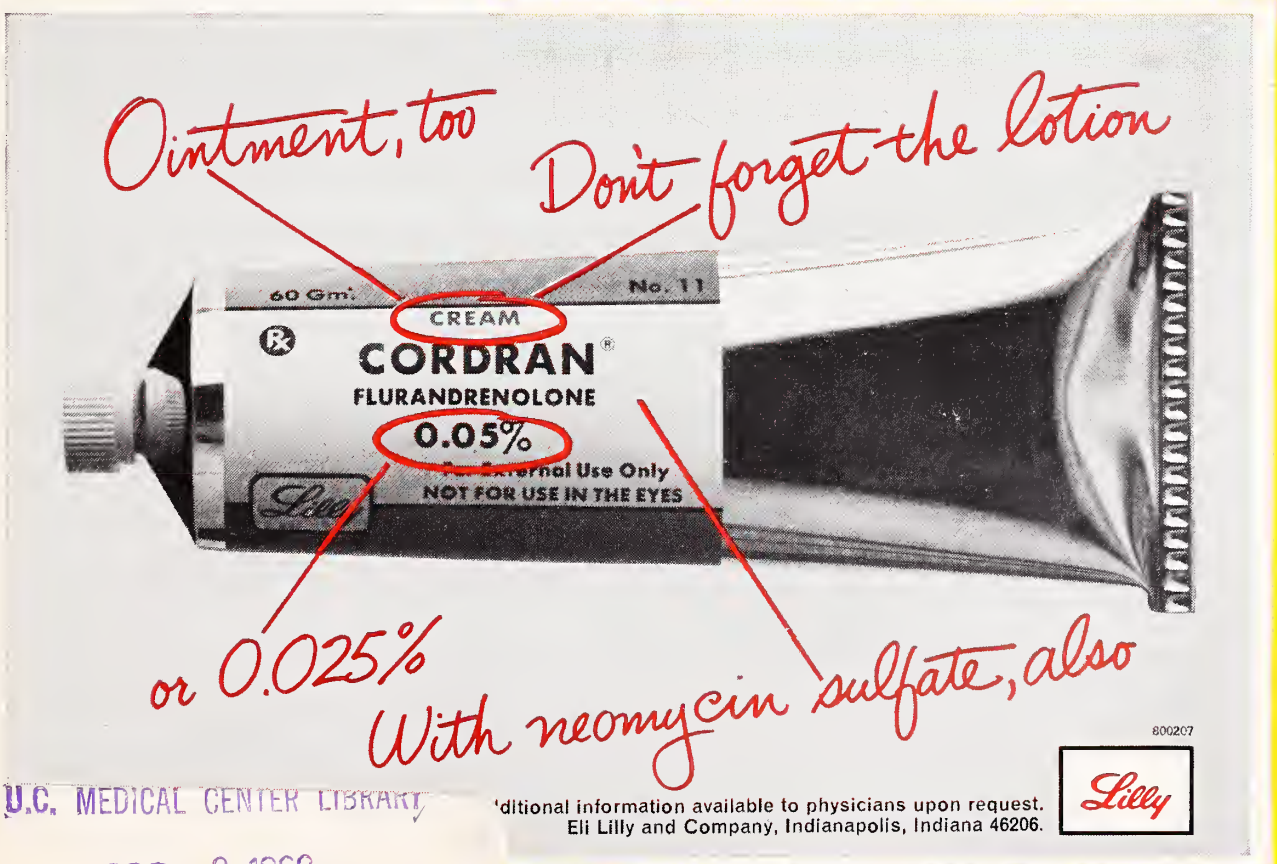
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- Angiographic Demonstration of the Bleeding Site in Acute Gastrointestinal Hemorrhage—Steven H. Cornell, M.D., Iowa City
- Hirschsprung's Disease: Current Status—Frank E. Miller, M.D., and Robert T. Soper, M.D., Iowa City
- Aspects of Developmental Dyslexia—A. L. Benton, Ph.D., and A. L. Sahs, M.D., Iowa City
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 494—Alcoholism, Ascites, Coma



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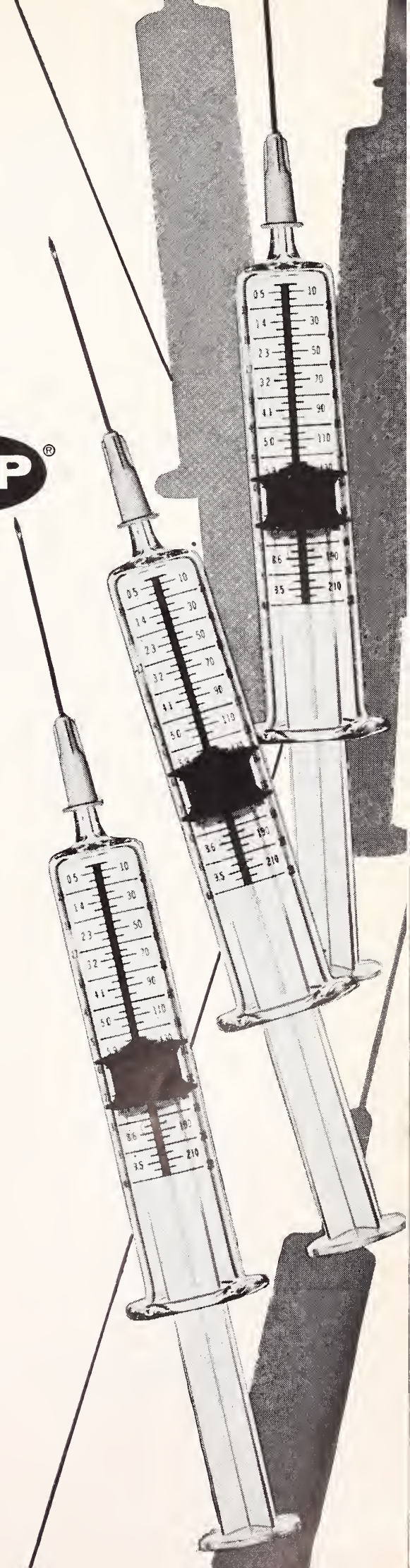


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Vol. LVIII April, 1968 No. 4

CONTENTS

A Possible Successor to Closed-Circuit Medical Television in Iowa
John R. Tiffany, M.A., Iowa City 357

SCIENTIFIC ARTICLES

Human Cytogenetics, Part I
Hans Zellweger, M.D., Iowa City 359

Angiographic Demonstration of the Bleeding Site in Acute Gastrointestinal Hemorrhage
Steven H. Cornell, M.D., Iowa City 364

Hirschsprung's Disease: Current Status
Frank E. Miller, M.D., and Robert T. Soper, M.D., Iowa City 370

Aspects of Developmental Dyslexia
A. L. Benton, Ph.D., and A. L. Sahs, M.D., Iowa City 377

University of Iowa College of Medicine Clinical Pathologic Conference No. 494 (Alcoholism, Ascites, Coma) 384

EDITORIALS

University Issue 395

Let's Be Even-Tempered, But Pleasantly So . . 395

Tryptophan in the Treatment of Depression . . 396

Bell's Palsy 397

Environmental Factors in the Incidence of Cardiovascular Disease 399

Osteomyelitis 401

SPECIAL DEPARTMENTS

Coming Meetings 343

The Month in Washington 346

President's Page 394

Letter to the Editor 402

University Hospitals Drug Letter (Dilantin®) . 403

The Doctor's Business 405

In the Public Interest facing page 406

State Department of Health 407

Iowa Association of Medical Assistants 410

Women's Auxiliary News 417

Personals 421

Deaths 438

MISCELLANEOUS

Volunteers Needed for U. of I. Coronary Drug Study 358

Dr. Moyers Is Appointed Head of Anesthesia at U. of I. 369

Dangerous Health-Club Reducing Programs . . 383

New Manual, New Program From Iowa Heart Association 409

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COMING MEETINGS

IN STATE

Apr. 5-6 **Postgraduate Course on Trauma to the Head and Neck,** University of Iowa College of Medicine, Iowa City.

Apr. 6 **Seventh Annual Orthopedic and Rehabilitation Seminar,** Younker Rehabilitation Center, Iowa Methodist Hospital, Des Moines.

Apr. 18-19 **Twelfth Annual Pediatric Conference of the Raymond Blank Hospital Association,** Iowa Methodist School of Nursing, Des Moines.

Apr. 19-20 **Iowa Clinical Surgical Society,** Davenport.

Apr. 28-May 1 **Iowa Medical Society Annual Meeting,** Hotel Fort Des Moines, Des Moines.

May 1-2 **Sixth Annual Workmen's Compensation Symposium,** Hotel Savery, Des Moines.

May 3-4 **Postgraduate Course on Cleft Palate, University of Iowa College of Medicine,** Iowa City.

May 21-22 **Postgraduate Course in Surgery, University of Iowa College of Medicine,** Iowa City.

CONTINENTAL U. S.

Apr. 1-5 **44th Annual Session American College of Physicians in association with The Royal College of Physicians of London,** Sheraton-Boston Hotel, Boston.

Apr. 1-5 **American College of Physicians 49th Annual Session in Association with the Royal College of Physicians of London,** Sheraton-Boston Hotel and War Memorial Auditorium.

Apr. 4-6 **Symposium on Fetal Medicine,** University of Wisconsin Medical Center, Madison.

Apr. 4-6 **Third AMA Conference on Health Education of the Public,** Pick-Congress Hotel, Chicago.

Apr. 7-11 **American Association of Neurological Surgeons (founded as the Harvey Cushing Society),** Conrad-Hilton, Chicago.

Apr. 7-11 **American Radium Society,** Fontainebleau Hotel, Miami Beach.

Apr. 8-9 **Practical Psychotherapy in the GP's Office,** University of Nebraska College of Medicine, Omaha.

Apr. 9-12 **American Association of Anatomists,** Jung Hotel, New Orleans.

Apr. 10 **American Society of Therapeutic Radiologists,** Fontainebleau Hotel, Miami Beach.

Apr. 11-13 **American Association for Cancer Research (59th Annual),** Haddon Hall, Atlantic City.

Apr. 15 **Symposium on Breast Cancer sponsored by St. Luke's Foundation,** St. Luke's Hospital, Kansas City, Missouri.

Apr. 15-17 **Postgraduate Course in Anesthesiology,** University of Kansas Medical Center, Kansas City, Kansas.

Apr. 15-19 **Postgraduate Course on High Risk Infant Care,** University of Colorado School of Medicine, Denver.

Apr. 15-20 **Federation of American Societies for Experimental Biology,** Convention Hall, Atlantic City.

Apr. 16-19 **West Virginia Academy of Ophthalmology and Otolaryngology (National Spring Meeting),** Greenbrier Hotel, White Sulphur Springs.

Apr. 17-20 **12th Annual Post Graduate Course on Fractures and Other Trauma, presented by Chicago Committee on Trauma of the American College of Surgeons,** John B. Murphy Memorial Auditorium, Chicago.

Apr. 17-19 **American Surgical Association,** Sheraton-Boston Hotel, Boston.

Apr. 17-19 **Management and Care of Respiratory Insufficiency,** University of Colorado School of Medicine, Denver.

Apr. 18-19 **Coronary Care Units in Community Hospitals,** University of Nebraska College of Medicine, Omaha.

Apr. 18-20 **Tennessee Medical Association,** Reed House, Chattanooga.

Apr. 18-20 **Medical Association of the State of Alabama,** Birmingham.

Apr. 22-24 **Arkansas Medical Society,** Arlington Hotel, Hot Springs.

Apr. 22-24 **American Association for Thoracic Surgery,** Pittsburgh-Hilton Hotel, Pittsburgh.

Apr. 22-25 **Southwestern Surgical Congress,** Brown Palace, Denver.

Apr. 22-25 **American Orthopaedic Association,** Boca Raton Club, Boca Raton, Florida.

Apr. 22-25 **1968 American Industrial Health Conference,** Hilton Hotel, San Francisco.

Apr. 22-26 **Clinical Endocrinology—Recent Advances in Diagnosis and Treatment,** Mayo Graduate School of Medicine (University of Minnesota) and Mayo Clinic, Rochester.

Apr. 22-27 **American Academy of Neurology,** Pick-Congress Hotel, Chicago.

Apr. 23-27 **Arizona Medical Association,** Safari Hotel, Scottsdale.

Apr. 25-27 **Postgraduate Course in Clinical Dermatology,** University of Colorado School of Medicine, Denver.

Apr. 25-28 **New York Roentgen Society,** Waldorf-Astoria, New York.

Apr. 25-28 **American Academy of Physical Medicine and Rehabilitation,** Sheraton-Chicago, Chicago.

Apr. 27-May 1 **American Academy of Facial Plastic and Reconstructive Surgery,** Diplomat Hotel, Hollywood Beach, Florida.

Apr. 28 **American Association of Electromyography and Electrodiagnosis (15th Annual),** Sheraton-Chicago Hotel, Chicago.

Apr. 28-May 1 **Kansas Medical Society,** Ramada Inn, Topeka.

Apr. 28-May 1 **American Association of Plastic Surgeons,** Shamrock-Hilton Hotel, Houston.

Apr. 29-30 **Fifth AMA Congress on Environmental Health Problems,** Drake Hotel, Chicago.

Apr. 29-May 1 **Postgraduate Course in Cine Angiographic Techniques in Cardiovascular Disease sponsored by American College of Chest Physicians,** Cleveland Clinic, Cleveland.

Apr. 29-May 2 **Nebraska State Medical Association,** Hotel Cornhusker, Lincoln.

Apr. 30-May 2 **Connecticut State Medical Society,** Hartford-Hilton Hotel, Hartford.

May 1-3 **Symposium on "Virologic Approaches to Cutaneous Diseases" sponsored by New York University School of Medicine,** New York.

May 2-5 **Texas Medical Association,** Shamrock Hilton, Houston.

May 3-4 **Symposium on Clinical Aspects of Pulmonary Circulation,** Plaza Inn, Kansas City, Missouri.

May 5-9 **New York State Academy of General Practice,** Concord Hotel, Kiameska Lake, New York.

May 6-9 **Aerospace Medical Association,** Americana, Miami Beach.

May 6-9 **American College of Obstetricians and Gynecologists,** Palmer House, Chicago.

May 8-12 **Florida Medical Association,** Diplomat, Hollywood, Florida.

May 12-15 **Frontiers in Gastroenterology, University of Pennsylvania School of Medicine,** Bellevue Stratford Hotel, Philadelphia.

May 13-16 **Pesticides and Public Health Course sponsored by National Communicable Disease Center,** Atlanta, Georgia.

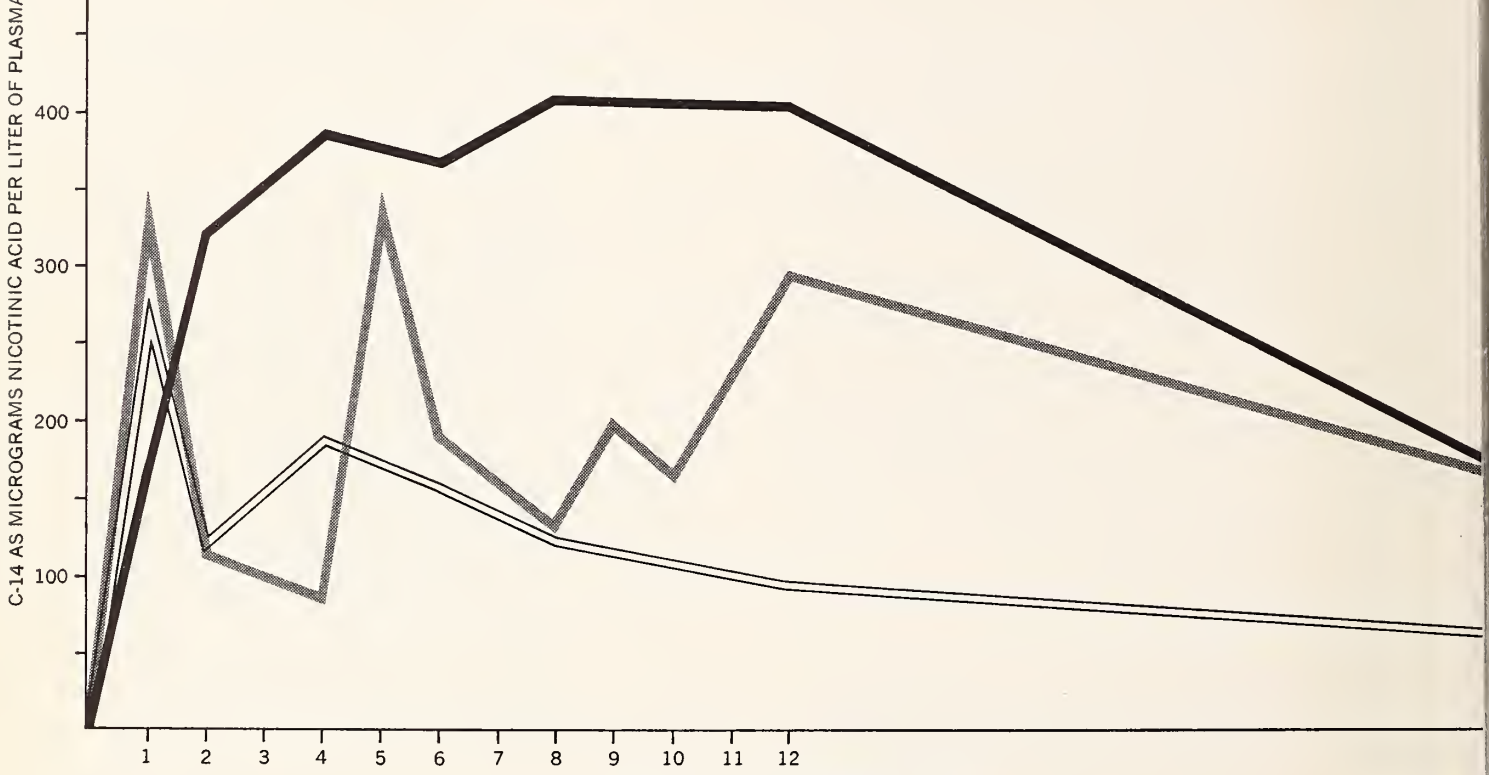
May 13-17 **State Medical Society of Wisconsin,** Sheraton-Schroeder Hotel, Milwaukee.

May 15-20 **Second International Congress of Lymphology,** Fontainebleau Hotel, Miami Beach.

(Continued on page 402)

Sustained circulatory, respirator and cerebral stimulation for th

Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.





(fewer absent doses by absent-minded patients)

Human volunteer subjects were administered Geroniazol TT tablets with the nicotinic acid component made radioactive with C-14. Plasma and urine samples were analyzed. (See Figures I and II) The radioactive tracer study substantiated the previous clinical evidence that the release of nicotinic acid from the Geroniazol TT tablet produced a gradual rise in plasma levels to a plateau for a total of 12 hours and more.

Such proven sustained activity makes the management of geriatric patients much easier by minimizing the possibility of neglected doses through absent-mindedness or senile confusion. Therapy *can* be continuous on a daily dose of only one Geroniazol TT tablet every 12 hours.

The gradual release of nicotinic acid in Geroniazol TT will provide the well-known peripheral vasodilatation needed in patients with deficient circulation and with a minimum amount (if any) of "flushing." Also cerebrovascular circulation is complemented by pentylenetetrazol, long-established as a cerebral and respiratory stimulant.

Geroniazol TT improves the typical, unfortunate signs of senile confusion. Patients become more alert

ged and debilitated

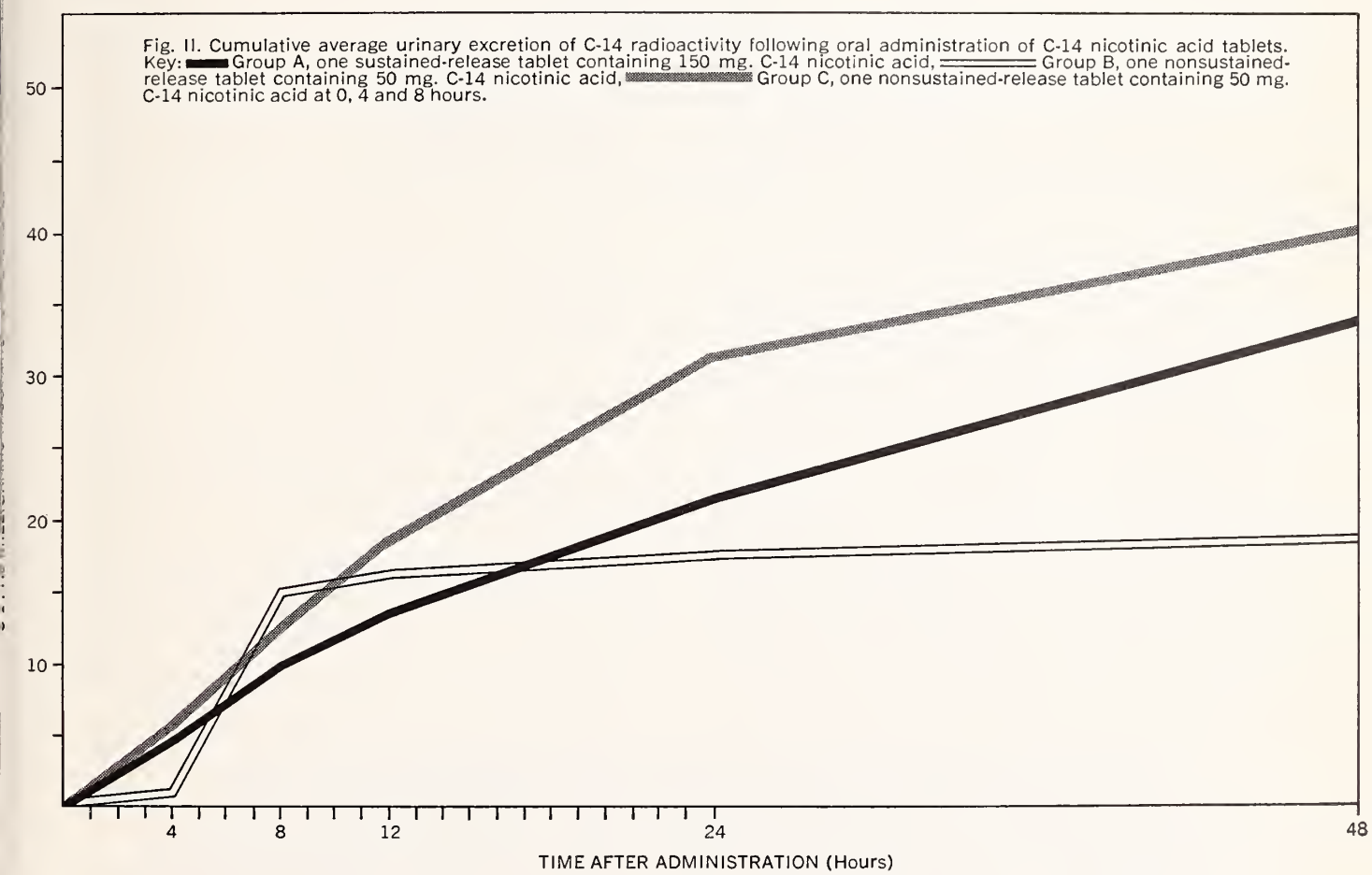


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▒▒▒ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ess confused and moody. Personal care, memory, emotional stability, social attention improve. Fatigue, apathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will permit your patients to enjoy the benefits of time-prolonged nicotinic acid/pentylenetetrazol therapy, at an economical price. Dosage is only one tablet every 12 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

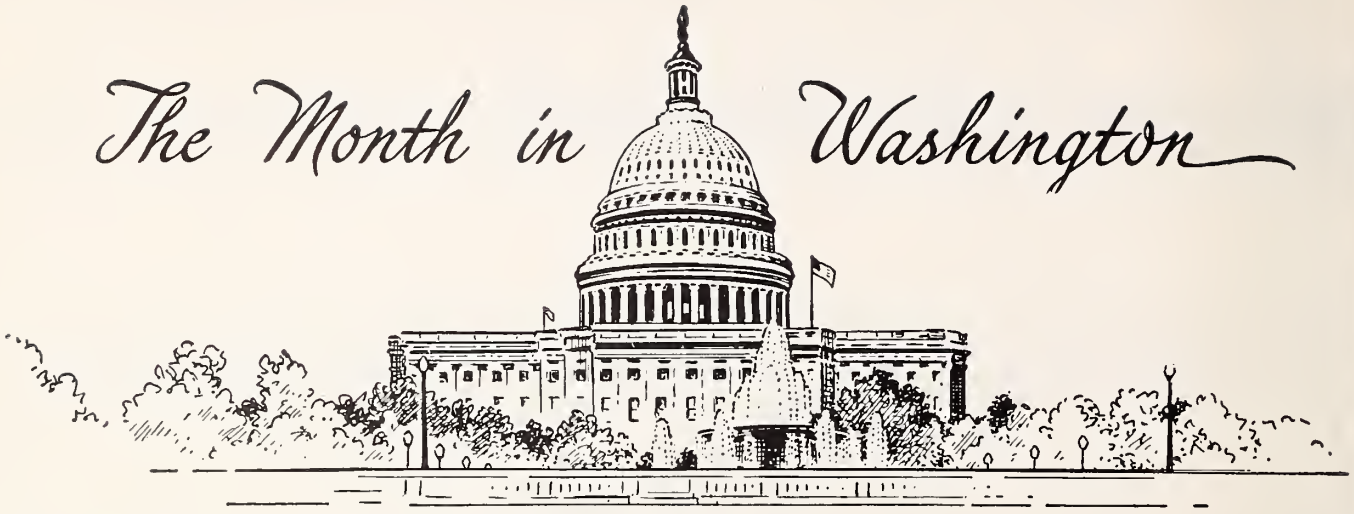
References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

"First with the Retro-Steroids"
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The Month in Washington



Washington, D. C.—The American Medical Association and the Association of American Medical Colleges have issued a joint policy statement calling for a substantial increase in the number of medical students. Dr. Milford O. Rouse, president of the AMA and Dr. John Parks, president of the AAMC, reviewed it at a news conference in Washington.

The statement "emphasized the urgent and critical need for more physicians if national expectations for health services are to be realized." It said: "National policy which would best meet this need, and would be consistent with the American ideal of equal educational opportunity for all, would provide such educational resources that every young person interested in and qualified for entry to the study of medicine would have this opportunity. Both Associations endorse the position that all medical schools should now accept as a goal the expansion of their collective enrollments to a level that permits all qualified applicants to be admitted. As a nation, we should address the task of realizing this policy goal with a sense of great urgency.

"In their endorsement of and call for a broadening of educational opportunity for the study of medicine, both Associations stress that the length of time necessary to realize such a goal does not minimize the need to respond to today's critical shortage of physician manpower. In order to enable the nation's medical schools both to meet today's crisis and to attain the longer-range goal of unrestricted educational opportunity, those responsible for allocation of resources must recognize the magnitude of these tasks."

The two Associations said both immediate and long-range steps should be taken.

The immediate steps are:

1. To increase the enrollment of existing medical schools.
2. To foster curricular innovations and other changes in the educational programs which could shorten the time required for a medical education and minimize the costs.
3. To meet the need for innovation in educational programs and to encourage diversity in the character and objectives of medical schools. The development of schools of quality where a primary mission is the preparation of able physicians for clinical practice as economically and rapidly as possible is to be encouraged. . . .

"A longer-range approach to the need for physicians is the development of new medical schools," the statement said. "This approach will not solve our immediate, urgent need for more physicians, but it is essential for meeting the national needs of 1980 and beyond."

The two Associations said the longer-range program would require adequate financial support from governmental and various private sources for:

1. Construction of facilities to expand enrollment of existing schools and to create new schools.
2. Support of the operational costs of medical schools.
3. Stimulation and incentive for educational innovation and improvement.

"To implement these measures will further require that each medical school and its university reexamine its objectives, its educational program, and its resources to determine how it can contribute most effiectively to the national need for more physicians and what financial help it will need to make this contribution," the statement said. "Also required is understanding by the public, the private foundations, industry, local and state governments, and the national Congress—groups which must provide the financial support which is necessary.

"Initiative for development of new schools and expansion of the established institutions should be locally determined. Only the governing bodies of schools with ongoing programs in medical education can decide to expand such programs. Institutions wishing to organize new medical schools must assume the responsibility for marshalling the necessary support. Both associations are prepared to lend any assistance they can to such efforts."

* * *

In a health message to Congress, President John-

(Continued on page 347)

son proposed controls on prices of drugs bought for government programs, and he asked for authority for the Food and Drug Administration to publish a drug compendium financed by drug manufacturers. He also asked for more money for health manpower, and for the maternity and child health programs.

With the objective of lowering costs, he also asked authority for the Health, Education and Welfare Department to establish new formulas for reimbursing hospitals and physicians under Medicare, Medicaid, and maternal and child health programs. The Social Security Administration immediately announced that it would begin "an experimental program to find methods of reimbursing hospitals and doctors that will have built-in incentives to efficiency and economy."

Participation in such experiments would be entirely voluntary, the SSA said, and Congress would have to approve the necessary legislation before new methods of reimbursement could be put in effect on a mandatory basis.

Under Medicare, a physician now is reimbursed on the basis of his usual and customary fee if it is considered reasonable.

HEW said that two methods of reimbursement involving physicians which might be tried are:

—Group-practice prepayment plans which offer comprehensive health services to their members could be reimbursed on a set per capita rate for the ensuing period.

—For physicians' services, experimental bases of payment might be a single fee related to total-illness services, rather than individual fees for each individual visit and individual service; agreed-upon fees held stable for specified periods; fees related to physician-time; or retainer or per capita payments per year for services of a specified kind.

Commenting on Mr. Johnson's health message, Dr. Rouse said: "There is great need for expanded health care service in the United States. Meeting this need requires devoting attention to all the elements involved in the supply of resources and manpower, the distribution of health care, and costs.

"The AMA supports private and governmental programs that help those who need help. Health care for all the people should be expanded in an orderly way so resources and needs are increased together and at comparable rates of growth.

"Government can and should support the construction and renovation of hospitals and extended care facilities, and together with the states and private sources, it should promote a rapid increase in medical manpower.

"As for drug prices, we believe that every patient should be able to buy high quality prescription drugs at the lowest possible price. The way to accomplish this is to promote more effective price competition at the retail level, which will result in lower prescription drug prices for everyone. This should be the thrust of government programs—not price fixing for one group. Everyone

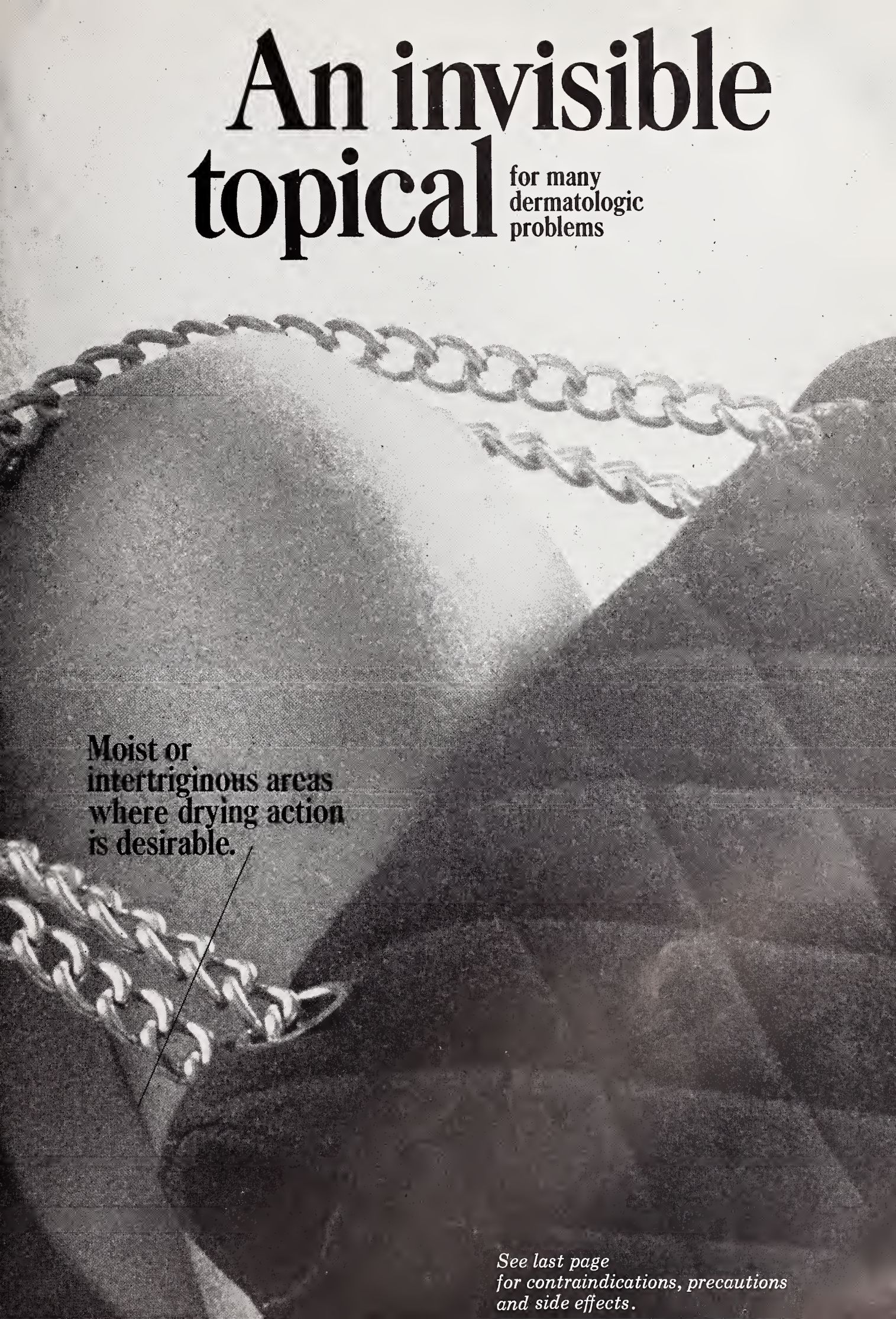
(Continued on page 354)

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Easy on the Mother
Tablets & Elixir
For Iron Deficiency Anemia
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Hairy sites where creams and ointments do not spread or penetrate readily.
Exposed areas where cosmetic considerations are important.

An invisible topical

for many dermatologic problems



Moist or intertriginous areas where drying action is desirable.

See last page for contraindications, precautions and side effects.

Structurally unique topical steroid in propylene glycol vehicle produces rapid response in many dermatoses.

Synalar Solution produces rapid antiinflammatory, antipruritic action through its unique topical corticosteroid, fluocinolone acetonide. The propylene glycol vehicle provides additional benefits for therapy at problem sites where it is difficult to achieve contact between the lesion and medication—or where creams or ointments may make the lesions worse. Synalar Solution has proved particularly valuable in the symptomatic treatment of seborrheic dermatitis of the scalp, nasolabial folds, eyebrows, ears, and in flexural folds such as the axillae, inframammary, umbilical and anocrural areas. It has also been reported to achieve excellent results in the adjunctive management of atopic dermatitis, contact dermatitis, neurodermatitis, nummular eczema, psoriasis, and sweat retention syndromes in these problem sites.

Penetrates the hairy sites.

In many areas of the body, hair gets in the way of treating the underlying dermatitis. The propylene glycol vehicle of Synalar Solution permits penetration and dispersion at sites where creams and ointments do not readily penetrate. May be applied without matting of hair.

Ideal for moist or intertriginous areas.

Propylene glycol is strongly hygroscopic and is especially useful where sweat retention is a problem. Its low surface tension permits easy spreadability in difficult-to-treat body areas. A number of studies have also shown that propylene glycol has inherent antimicrobial activity.



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Synalar Solution possesses
any useful cosmetic properties.
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dvanced topical corticosteroid.

Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components.

Precautions: In some patients with dry lesions, the solution may increase dryness, scaling, or itching. Application to denuded or fissured areas, such as genital or perianal sites, may produce a burning or stinging sensation. If this persists and dermatitis does not improve, discontinue medication. Although propylene glycol has antiseptic activity, there should be careful initial evaluation and follow-up of infected sites. Incomplete response or exacerbation of lesions may be due to true infection, which requires susceptibility testing and appropriate therapy. On the other hand, saprophytic or low grade infections may clear spontaneously under the influence of Synalar Solution alone. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time.

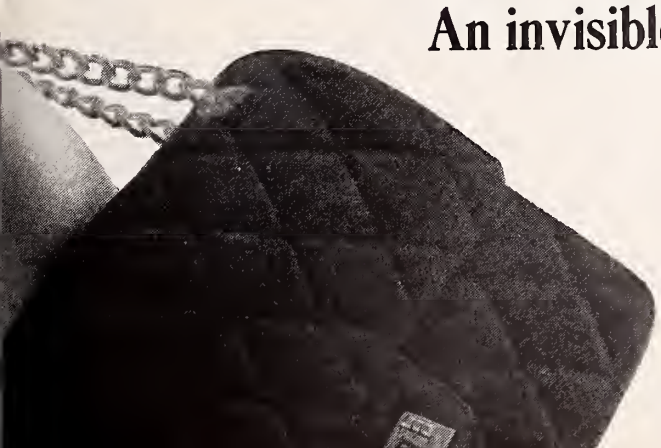
Side Effects: Side effects are not encountered ordinarily with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions.

Availability: Synalar (fluocinolone acetonide) Solution 0.01% in a propylene glycol vehicle with citric acid as preservative. 20 and 60 cc. plastic squeeze bottles. *Also available:* Synalar (fluocinolone acetonide) Cream 0.025% —5, 15 and 60 Gm. tubes and 425 Gm. jars. Cream 0.01% —15, 45 and 60 Gm. tubes and 120 Gm. jars. Ointment 0.025% —15 and 60 Gm. tubes. Neo-Synalar® (neomycin sulfate 0.5% [0.35% neomycin base], fluocinolone acetonide 0.025%) Cream —5, 15 and 60 Gm. tubes.

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SYNTEX
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Synalar®
(fluocinolone acetonide)
Solution
0.01%

An invisible topical



He isn't burdened by his hypertension or his therapy...



Butiserpazide® lowers blood pressure so smoothly that patients are often untroubled by either the disease...or treatment

BUTISERPAZIDE provides not only the classic thiazide/reserpine formula; it supplements it with the mildly sedative effect of BUTISOL (butabarbital).

Clinical comparisons have shown that many patients respond to this treatment with (1) smooth, uniform lowering of blood pressure[1]... at times *below* the levels attained with previous therapy[2]; (2) "striking" improvement in such symptoms as headache, nervousness, palpitation and dizziness[2]; plus (3) "...lowered incidence of drug side effects."[2]

And BUTISERPAZIDE offers an added advantage: the usual dosage is just 1 tablet once or twice daily. It is available in two strengths for dosage flexibility. Are there any hypertensives in *your* practice who might find life a little pleasanter on BUTISERPAZIDE?

Contraindications: Sensitivity to any component, porphyria, peptic ulcer, ulcerative colitis, mental depression, renal impairment or shutdown. **Warnings:** Consider the possibility of sensitivity reactions in patients with history of allergy or bronchial asthma. Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions, which have led to obstruction, hemorrhage and perforation. Surgery has frequently been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occur. *Use in Pregnancy:* Exercise caution, since thiazides cross the placental barrier and may cause fetal or neonatal hyperbilirubinemia, thrombocytopenia or altered carbohydrate metabolism; adverse reactions seen in the adult may occur in the newborn. **Precautions:** *Butisol* (butabarbital)—Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression. *Hydrochlorothiazide*—May induce electrolyte imbalance; when used with digitalis or one of its glycosides and in patients with severe hepatic insufficiency, cardiac arrhythmias or symptoms of impending hepatic coma may occur. Discontinue and institute appropriate countermeasures if prolonged use produces hypokalemia or (likely only with sodium restriction) hyponatremia and hypochloremic alkalosis. (Ammonium chloride, used to reverse hypochloremic alkalosis, is contraindicated in hepatic disease.) May produce elevated serum uric acid levels (and, infrequently, gout) or reduce glucose tolerance, altering insulin requirements in diabetics. *Reserpine*—Observe for signs or symptoms of peptic ulcer or ulcerative colitis. Discontinue at first sign of mental depression; keep in mind possibility of suicide. Exercise extreme caution in history of mental depression. May produce cardiac arrhythmias when used with digitalis and quinidine, or may precipitate biliary colic in patients with gallstones. Discontinue 1 to 2 weeks before surgery; inform the anesthetist in event of emergency surgery. Exercise caution in history of epilepsy. Discontinue 1 to 2 weeks before ECT. *General*—Reduce concomitant antihypertensives by at least 50%, and exercise caution in coronary artery disease. **Adverse Reactions:** Dizziness, drowsiness, weakness, nasal congestion, leg cramps, nausea, palpitation, superficial skin bruises, headache, dehydration, skin rash, "hangover," systemic disturbances, diarrhea, itching, vomiting, paresthesia, photosensitivity, pancreatitis, jaundice, xanthopsia, purpura, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, anorexia, gastric irritation, abdominal cramping, constipation, glycosuria, vertigo, cutaneous vasculitis, orthostatic hypotension (potentiated by alcohol, barbiturates, or narcotics), increased salivation and gastric secretion, increased intestinal motility, loose stools, angina-like syndrome, arrhythmias, bradycardia, flushing, hypotension, nervousness, paradoxical anxiety, rarely atypical Parkinsonian syndrome, central nervous system sensitization (manifested by dull sensorium, deafness, glaucoma, uveitis, optic atrophy), dryness of mouth, syncope, epistaxis, weight gain, and impotence or decreased libido. **Usual Adult Dosage:** BUTISERPAZIDE®-25 or BUTISERPAZIDE®-50: 1 tablet daily or b.i.d. *Before prescribing or administering, see package insert.*

References: 1. Johnson, H. J., Jr.: Penna. M. J. **67**:35, 1964. **2.** Coodley, E. L.: Curr. Ther. Res. **4**:460, 1962.

Butiserpazide®-25

PRESTABS®* Tablets

BUTISOL® (butabarbital) 30 mg.†; Hydrochlorothiazide 25 mg.; Reserpine 0.1 mg.

Butiserpazide®-50

PRESTABS®* Tablets

BUTISOL® (butabarbital) 30 mg.†; Hydrochlorothiazide 50 mg.; Reserpine 0.1 mg.

†**Warning:** May be habit forming.

*15 mg. of **Butisol** (butabarbital), plus the other ingredients, in outer layer; 15 mg. of **Butisol** (butabarbital) in a specially coated core for delayed release, to approximately equalize duration of action for all components.

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should be encouraged to be more price conscious in buying prescription drugs. The physician should include both medical and price considerations in writing prescriptions, and the patient should patronize that pharmacy which can furnish dependable service and the prescribed product at the lowest possible price. . . .

"The President's message contains little essentially new. It concentrates again on pouring additional millions of dollars into a health-care system that is already facing requirements well beyond what it can now meet.

"Government expenditures for health care should be moderated during this period of acute shortage to control rapidly rising cost. Government can be most helpful by controlling inflation and by providing tax deductions and credits for people purchasing health insurance. . . .

"The physicians of this country will welcome a genuine partnership in health, where the Federal government will sincerely and continually seek the advice and active collaboration of those whose special services lie in medical education and in the planning and provision of superior-quality medical care for all citizens."

* * *

The Board of Medicine of the National Academy of Sciences stated that the transplantation of human hearts still is in the experimental stage, and proposed three guidelines for the procedure.

The Board said human cardiac transplantation should be carried out only at institutions in which these three criteria can be met:

1. The transplant teams should be highly skilled and should have had extensive laboratory experience.
2. The work should be carefully planned, and the results should be rapidly communicated to others in the field.
3. Both the teams and the patients should be protected by "rigid safeguards."

* * *

A check is being made to determine how many alien physicians, dentists and "allied specialists" are now subject to draft laws. A new law for the first time makes aliens in the medical and dental professions subject to draft up to age of 35.

* * *

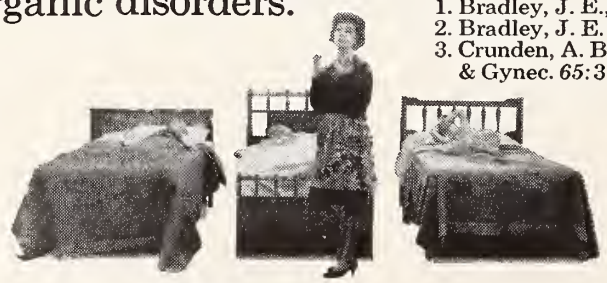
President Johnson asked Congress for $571.7 million more for Medicaid for the 1968 fiscal year ending July 1, 1968. The administration said the initial approrpriation proved inadequate because of a complete lack of data and experience as to costs of such a program, and a larger increase than expected in costs of hospital and other medical care.



Togetherness....

...can be rough when epidemics of nausea and vomiting strike a family. Emetrol offers prompt, safe relief. It is free from toxicity[1] or side effects[2,3] and will not mask symptoms of serious organic disorders.

1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst, & Gynec. *65*:311 (Feb.) 1953.



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Emetrol®
phosphorated carbohydrate solution
emesis control

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains Methyclothiazide 5 mg. with Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains Pargyline Hydrochloride 25 mg. with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

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A Possible Successor to Closed-Circuit Medical Television in Iowa

JOHN R. TIFFANY, M.A.
Iowa City

While it is unlikely that television will ever replace medical journals and conferences as traditional communication tools in postgraduate medical education, the medium probably will become increasingly significant in the near future. Just exactly how television will eventually be harnessed to the educational needs of the medical community is dependent upon a better understanding of the medium's limitations and potentials in the specialized area of medical communication.

Valuable experience in the use of television for medical education was gained through operation of the Iowa Medical Television Network, a pilot project conducted from February, 1965, to February, 1967. The leased, one-way, closed-circuit micronetwork linked the University of Iowa Medical Center with four hospitals in Des Moines and two in Cedar Rapids. Hospitals in the network included Broadlawns Polk County Hospital, Iowa Methodist Hospital, Mercy Hospital, and Veterans Administration Center in Des Moines, and Mercy Hospital and St. Luke's Hospital in Cedar Rapids.

The network was established to test the practicality of using television to provide current medical information to practitioners in the Linn and Polk County regions, and to strengthen scientific communication between those physicians and physicians at the Medical Center. Various aspects of the network were studied during its period of operation. This report is based on a final study conducted by the author after completion of the two-year network pilot project.

During the two years, 864 hours of programs were televised to the participating hospitals. Ninety-eight per cent of the programs were produced by the Medical Television Unit at the University, and only two per cent were borrowed from other medical schools or from the Network for Continuing Medical Education. Initially, network programs were mostly regular College of Medicine functions, such as clinical conferences and presentations by visiting lecturers. A few special panel discussion programs also were produced especially for the network audience.

Five hours of original programs were produced each week, and each original hour was replayed at least twice—at different times on different days—to provide maximum program exposure. An early survey indicated that more programs were being offered than could be effectively utilized. The number of programs originally telecast was reduced from five to three per week. Because many viewers felt the one-hour programs were too long, it was further decided to produce a series of 100 special 20- to 30-minute lectures, which probed certain medical topics in depth.

The average viewing audience for any given program was found to be about 30 physicians, a number which was comparable but no greater than the numbers of viewers reported by medical-television networks in other parts of the nation. One factor limiting the size of the audience is that there does not seem to be a mutually "ideal" time for all physicians to watch telecasts. The physician has only so much time he can spend on medical television-viewing, and the particular period when he may have free is dictated by his patient schedule. In the final study of the Iowa network, most physicians questioned indicated that, in general, the best times and days for medical television viewing were before 9 a.m., at noon, and in the early evening, Monday through Friday.

Operating at an annual cost of $84,336.80, the average cost of the network's programing was low compared to the costs of open-circuit programs. Each hour of programing on the Iowa network cost about $196. One of every three hours telecast was a new program, and two-thirds of the programs were videotape replays. Multiple broadcasts of programs can lower the cost per program, but by increasing the number of rebroadcasts of a program it is possible to reach a point where the gain in audience is less than the added cost of rebroadcasting. The six participating hospitals paid the cost of the leased transmission facilities (about $700 per hospital per month). The University paid all production costs.

Experience gained from operation of the Iowa Medical Television Network indicates that pro-

Mr. Tiffany is a communications assistant with the Iowa Regional Medical Program and director of the University of Iowa Medical Television Unit.

grams must be made more readily available to physicians, either individually or in groups, at a time when it is convenient for them to watch. Recent technical developments have sharply lowered the price of television recording, and increasing portability, the most obvious solution in bringing medical television and physicians together, might be the use of portable videotape recorders. Some of these machines now on the market will reproduce images of a quality acceptable for most medical programing. Two dozen of those machines could now be purchased for less money than it cost to operate the Iowa network for one year.

The portable machines could be placed in hospitals, clinics, offices, and homes, and videotapes could be sent from the Medical Center to these locations. Another plan which could accomplish the same objective would be for the Medical Center to supply programs on videotape to regional centers throughout the state, where the tapes could be catalogued and then redistributed to individual physicians or groups of physicians.

Operation and analysis of the Iowa Medical Television Network also indicates that considerable attention must be paid to the production of the programs. No matter how convenient and efficient the distribution system, the programs will not be widely or profitably utilized unless certain production standards are set and maintained. In many ways, technical and other, teaching by television is different from traditional classroom patterns.

Like other methods of continuing medical education, television will not achieve maximum effectiveness if it fails to fulfill specific audience needs. Methods for obtaining and evaluating audience responses such as questionnaires, interviews, and local television review committees, should be used to gauge program quality and suggest subject areas of interest to the audience.

Volunteers Needed for the U. of I. Coronary Drug Project

The incidence of coronary artery disease in American men is approaching proportions that have justified someone's calling it "the great American epidemic." The scope of the problem has generated research into both basic mechanisms and therapeutic approaches. New drugs have been devised for the treatment of angina pectoris, and myocardial revascularization surgical procedures are proliferating. It is readily apparent that treatment of coronary heart disease after it becomes overt is not the answer to the problem. Research into the basic mechanisms of lipid metabolism has yielded interesting results and may offer hope for the control of coronary atherosclerosis.

It has been known for some time that changes in lipid intake can alter the lipid composition of the plasma. Since cholesterol and other lipid substances in the blood make up a large proportion of the atherosclerotic plaque, attempts have been made to alter the natural history of coronary atherosclerosis by changing the concentration of lipids in the blood. The difficulty of controlling lipid intake adequately by diet alone has led to the development of drugs which interfere at one stage or another in the component processes of lipid metabolism. Drugs have been developed which can consistently lower blood cholesterol and certain other blood lipids.

An important unanswered question is whether lowering of serum lipid levels and cholesterol will actually alter the natural history of coronary heart disease. To investigate this possibility, the National Heart Institute has devised a large-scale cooperative clinical trial supported by research grants to study the efficacy of four cholesterol-lowering drugs in the management of coronary artery disease. The University of Iowa College of Medicine has been designated as one of 55 centers which will cooperate in this study. This study will involve approximately 150 men ages 30 to 64 with a documented history of myocardial infarction. It is a five-year study aimed at improving long term survival among recovered heart attack victims. The specific goal of the Coronary Drug Project is to determine whether one or more drugs being tested will effect a 25 per cent or greater reduction in the five-year mortality rate among treated myocardial-infarction patients.

The drugs to be tested have all been shown capable of lowering blood lipid levels, and to be free of serious toxicity. All have been licensed by the Food and Drug Administration. They include conjugated equine estrogens 2.5 and 5 mg/day; dextrothyroxine 6 mg/day; clofibrate 1.8 Gm/day; and nicotinic acid 3 Gm/day.

The study is designed not to interfere with the private physician's care of his patient. All men between the ages of 30 and 64 who have had electrocardiographically-documented myocardial infarctions are eligible for the study. The only exclusions are those men who are taking anticoagulants or insulin, or who have some other life-threatening disease which would preclude their continuing in the study for five years.

At this time volunteers for the study are urgently needed. The principal investigator of the project at the University of Iowa is Dr. Donald L. Warkentin, an assistant professor of internal medicine. Any practitioner with a patient who he thinks might qualify for this project should contact Doctor Warkentin. The patient is not charged for any of the laboratory work or drugs involved in the study, and the only requirement is that he must visit Iowa City six times the first year and three times per year thereafter. This study is of vital importance, since it may help answer the question of whether alteration in blood lipids does affect coronary artery disease. Volunteers are needed.

Scientific Articles

Human Cytogenetics, Part I

HANS ZELLWEGER, M.D.
Iowa City

HUMAN CYTOGENETICS is concerned with the study of man's chromosomes, their number, size, and shape.

Chromosomes are located in the nucleus and carry the genes, the units of genetic endowment.

Normal Chromosomal Complement. Each chromosome has a centromere and two arms. Chromosomes differ in length, the longest (the A chromosomes) being three to four times larger than the smallest (the G chromosomes). Metacentric chromosomes have the centromere in the middle, between two arms of nearly equal length. The centromere is somewhat off-center in submetacentric chromosomes, and is near the end of the chromosome in telo- or acrocentric chromosomes (the D and G chromosomes). The large acrocentric D chromosomes and the small acrocentric G chromosomes are satellited (Figure 1).

Man has 23 pairs of chromosomes—22 pairs of autosomal chromosomes and one pair of sex chromosomes (XX in females, XY in males). The autosomes and the X chromosomes carry genes; the Y chromosome is genetically empty but enhances male sexual development. One chromosome of each pair stems from the father of a given individual, and the other from his mother.

The autosomal pairs are numbered from 1 to 22, and can be divided into seven groups. The X chromosomes belong to group C; the Y chromosome to group G (Table 1).

Under normal conditions, all mononuclear stem cells of the body and the gametic cells (ovogonium and spermatogonium) are diploid; they have two sets of 23 chromosomes. The gametes (sperms, ova, and their immediate precursors) are haploid; they have *one* set of 23 chromosomes.

ALTERATIONS OF CHROMOSOME STRUCTURE

Chromatid and isochromatid breaks (Figure 2), ring chromosomes, and triradial and quadriradial exchanges (Figure 3), occur in normal persons. The incidence of breaks in normal controls amounts to about 2-3 per cent; the incidence of triradial and quadriradial exchanges amounts to 0.04 per cent and 0.0025 per cent of cells, respectively. The incidence is increased after viral infections (measles, chicken-

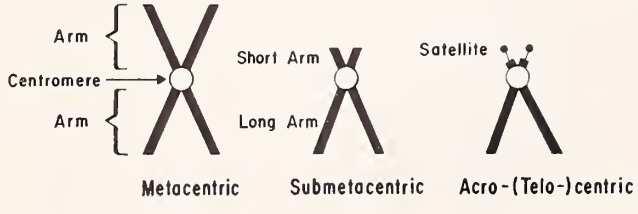


Figure 1. Normal chromosome (schematic drawing).

Dr. Zellweger is a professor of pediatrics at the U. of I. College of Medicine. This study was supported in part by Public Health Service grant 5P01NB05489-02.

TABLE I

DENVER CLASSIFICATION OF HUMAN CHROMOSOMES

Group	Number of Autosomal Pairs	Sex Chromosomes	Size and Shape of Chromosomes	Number of Chromosomes Males	Females
A	1- 3		Large metacentric or submetacentric	6	6
B	4- 5		Large submetacentric	4	4
C	6-12	X, XX	Medium-sized metacentric or submetacentric	15	16
D	13-15		Large acrocentric	6	6
E	16-18		Small metacentric or submetacentric	6	6
F	19-20		Small metacentric	4	4
G	21-22	Y	Small acrocentric	5	4

pox), after exposure to X-rays and ionic radiation, and after intakes of drugs such as LSD, chlorpromazine, aminopterin, nitrogen mustard or Daraprim, and is elevated in Fanconi's anemia, Bloom's disease, and ataxia telangiectasia. Whether the frequent occurrence of malignancies—notably lymphomas and leukemias—in Fanconi's anemia, Bloom's disease, and ataxia telangiectasia is related to the alterations of the chromosomal structures found in such diseases is not clear, and the significance of these alterations is not fully understood, nor has the effect that chromosomal breaks have upon progeny been determined. Drug intake during pregnancy may produce breaks in the white blood cells of the fetus, but such breaks are not necessarily teratogenic. Isolated fragments do not replicate, and are normally lost during mitosis. It appears that breaks occur preferentially in the short arm of chromosome 5, and in either the short or the long arm of chromosome 18. If the smaller fragment is lost, a partially deleted chromosome results, and a deletion syndrome may result. (See below.) The Philadelphia chromosome, which is found in chronic myeloid leukemia, is characterized by partial deletion of the long arm of chromosome 21. It appears selectively in some cells of bone marrow and peripheral blood. Structural alterations such as inversion and duplication are listed in schematic form in Figure 2. Inversions sometimes occur as familial markers.

EXAMPLES OF DELETION SYNDROMES

Some authors feel that no well defined syndrome is associated with deletion of either the long or the short arm of chromosome 18.[1] The

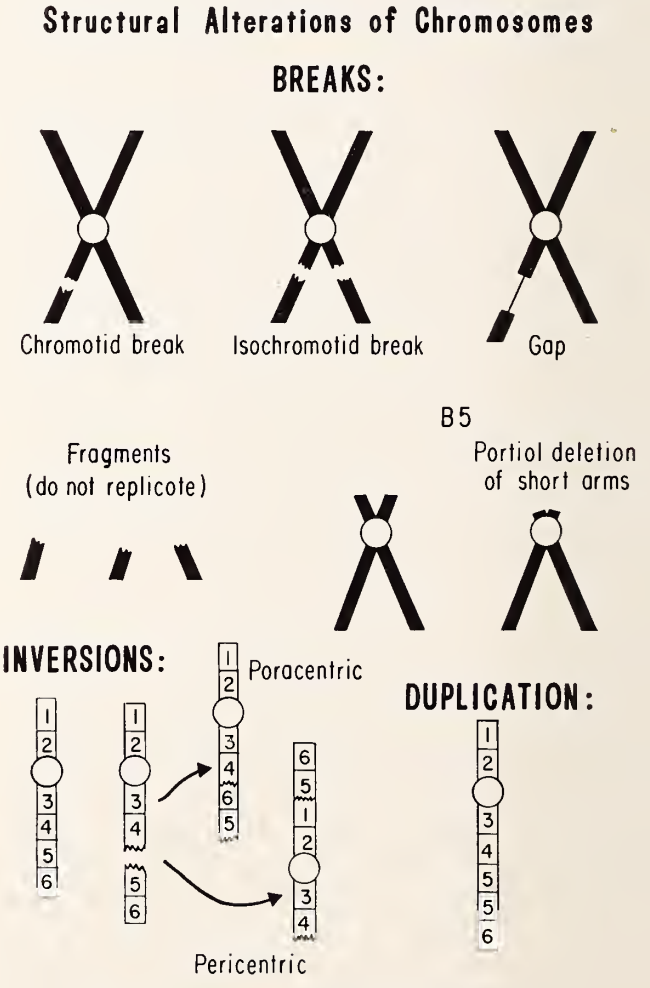


Figure 2. Alterations of chromosome structure, I.

phenotype of the cat-cry syndrome is fairly well delineated.

Cat-Cry Syndrome, Partial Deletion of Chromosome B5. As young infants, these children have a weak, high-pitched, wailing cry similar to the mewing of a cat. Findings associated with this syndrome are delay in psychomotor development, failure to thrive, moderate microcephaly, moon face with hypertelorism, antimongoloid slant of the eyes, epicanthus, strabismus, micrognathia, and low-set ears.[2]

Partial Deletion of Long Arm of Chomosome 18. Fourteen patients (six males and eight females) with this anomaly had been reported as of June, 1967. The main findings are low birthweight (below 2,800 Gm.), failure to thrive, psychomotor retardation, moderate microcephaly, midface dysplasia, prognathia, atresia or hypoplasia of ear canal, pronounced antihelix, ocular anomalies (such as abnormal discs, retinal degeneration, microcornea, and glaucoma), subacromial (and other periarticular) dimples, elongated palms, spindle-shaped fingers, five or more whorls on fingertips, muscular hypotonia, absence or hypoplasia of labia minora in females, and undescended testicles in males.[3, 4]

Partial Deletion of Short Arm of Chromosome 18. Fourteen such cases (five males and nine females) had been reported as of September, 1966. The main findings are significant mental retardation, growth retardation, absence of cardiac, renal, or gastrointestinal malformations, and a spectrum of minor anomalies such as hypertelorism, micrognathia, strabismus, low-set ears, round face, pterygium, widespaced nipples, and cubitus valgus. Holoprosencephaly, microcephaly, hypoplasia of nasal skeleton, and cleft lip and palate have been reported in some cases.[5]

Annex: Philadelphia (Ph') Chromosome, Partial Deletion of Long Arm of Chromosome 21. Partial deletion of the long arm of a G chromosome, presumably chromosome 21, has been described in chronic myeloid leukemia. It arises in the precursor cells common to the erythroid, granulocytic and megakaryocytic series, but not in the lymphoid series of the hemopoietic cells. Its occurrence in the blood in this form of leukemia corresponds to the appearance of immature cells; hence it disappears from the blood during remissions. It is found persistently in the bone marrow, however, appearing there as a very early manifestation of the disease. It is never found in other cells such as skin fibroblasts. Hyperdiploid cells may show two Ph' chromosomes.

The Philadelphia chromosome occurs in the majority of cases of chronic myeloid leukemia, although a number of persons affected with

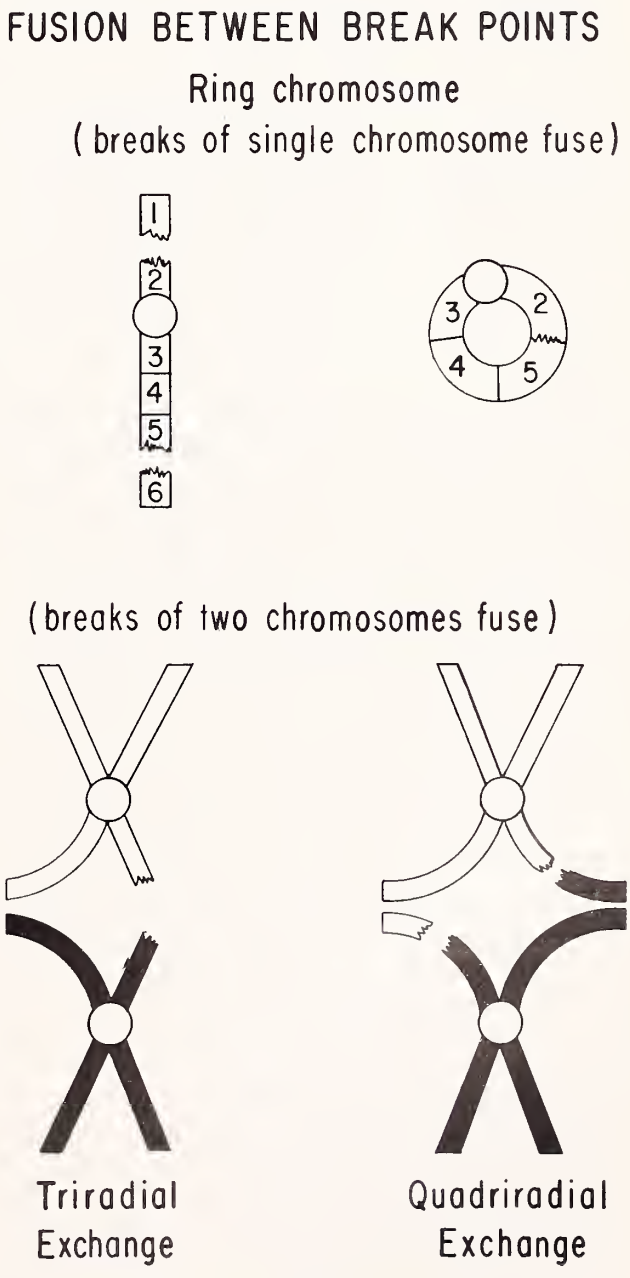


Figure 3. Alterations of chromosome structure, II.

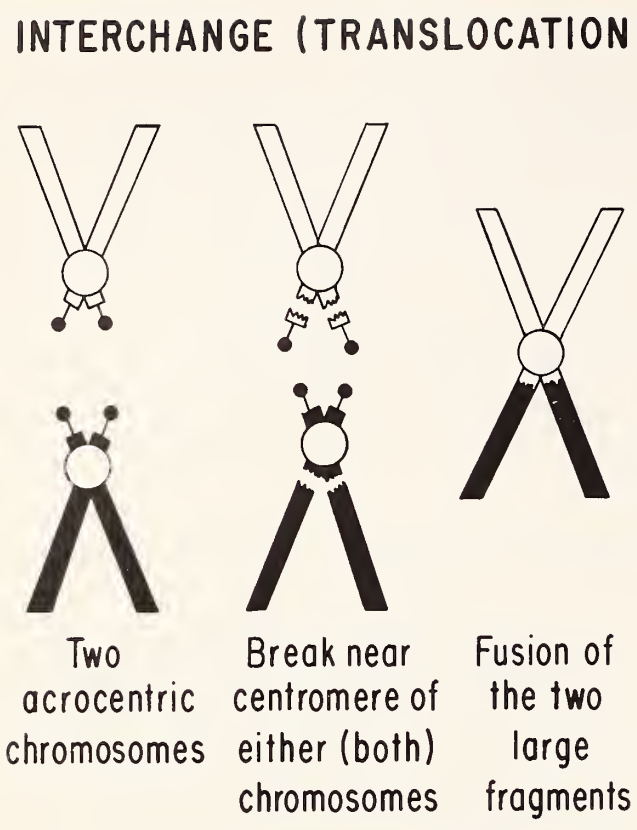


Figure 4. Interchange (translocation).

that disease, especially young children, do not show this Ph′ chromosome. Persons who have chronic myeloid leukemia without a Ph′ chromosome usually have a lower white blood cell and platelet count and a shorter survival (averaging 18 months versus 45 months) than do persons having the same disease with Ph′ chromosome. They also respond poorly to antileukemic treatment.

The Ph′ chromosome rarely appears in other leukemias, such as acute myeloid leukemia,[6] and its presence may be indicative of acute exacerbation of chronic myeloid leukemia.[7]

The G microchromosome occasionally found in mongoloids and their relatives is probably not related to the Ph′ chromosome.[8]

INTERCHANGE (TRANSLOCATION)

Most interchanges (translocations) occur between two acrocentric chromosomes. The resulting structures contain the long arms of two acrocentric chomosomes (G/G or D/G) and one centromere (Figure 4). The remaining parts of the two chromosomes (satellites, short arms, and one centromere) are usually lost. Consequently, karyotypes with the so-called "balanced" translocation or interchange heterozygosity have only 45 chromosomal structures—44 regular chromosomes and the above-mentioned fused structure. Despite the loss of a considerable amount of chromosomal material, individuals with a balanced translocation are phenotypically normal.

The effect of interchanges on gametogenesis will be discussed later.

A karyotype which includes a D/Gm* (or G/Gm) translocation plus four (three) autosomal G chromosomes (unbalanced translocation) results in a partial trisomy Gm or translocation mongolism. A karyotype with a D/D′ translocation and five additional D chromosomes results in a partial trisomy D′.

ISOCHROMOSOME

In regular mitosis and meiosis II, the centromere divides into two halves, with one chromatid attached to each half. If, however, the centromere divides on a different plane, two long arms will remain with one half-centromere, and two short arms will remain with the other half-centromere (Figure 5). Replication results in an isochromosome. Presence of an isochromosome of an acrocentric chromosome G or D cannot be distinguished from a G/G or D/D translocation, respectively. A sex chromosomal complement of an X chromosome plus an X isochromosome (long arm) may result in gonadal dysgenesis.

SUMMARY

The various aberrations of the chromosome structure have been reviewed, and some of their implications have been discussed.

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* Gm = mongolism chromosome.

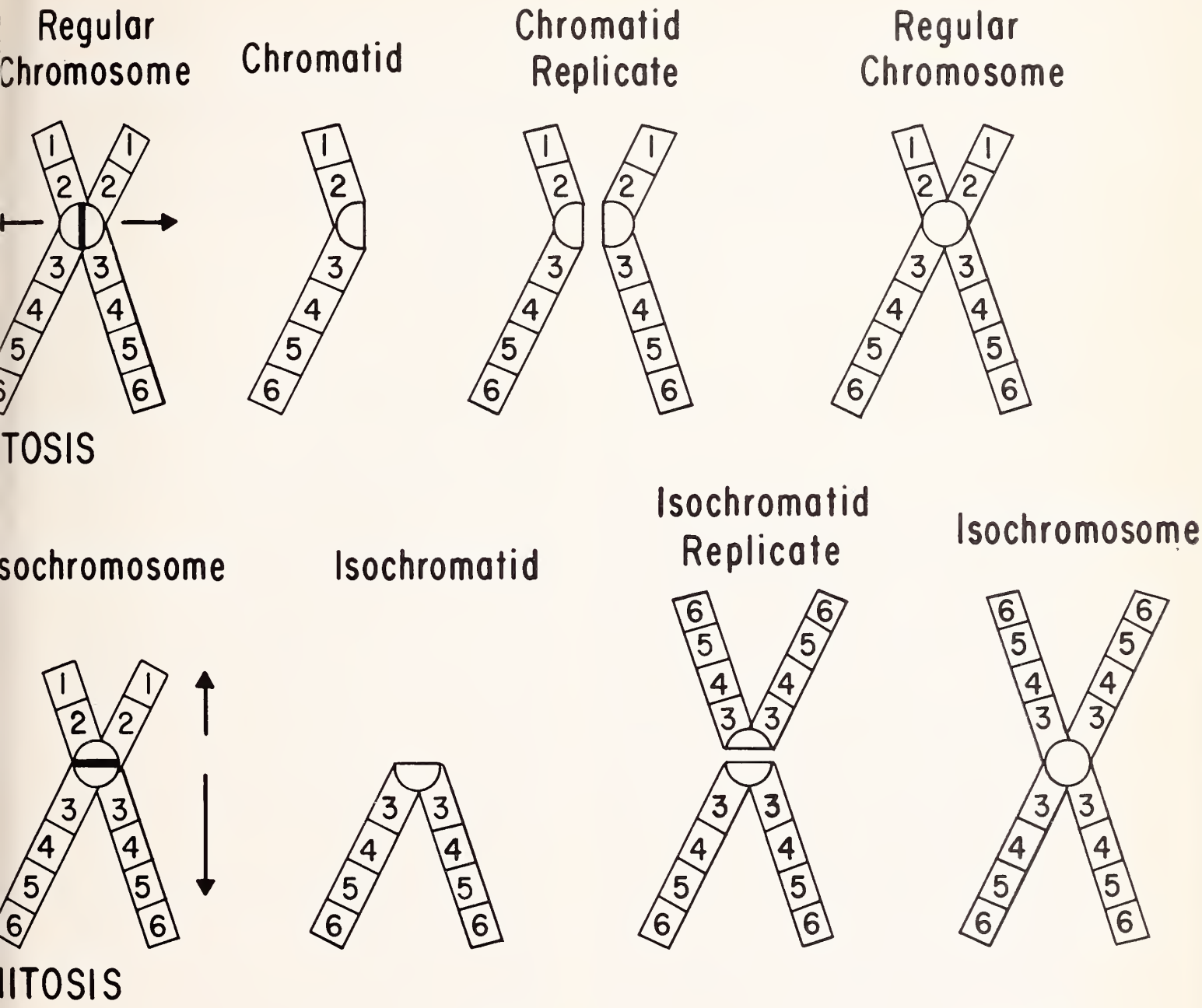


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Angiographic Demonstration of the Bleeding Site in Acute Gastrointestinal Hemorrhage

STEVEN H. CORNELL, M.D.
Iowa City

FINDING THE SOURCE OF BLEEDING in a patient with gastrointestinal hemorrhage may be a vexing problem. In one series of 102 patients, 64 had peptic ulcers, but many of them were diagnosed only after several examinations.[1] The exact site of bleeding was never found in 20 per cent of the cases, in spite of repeated roentgenographic examinations and laparotomy. Shallow gastric ulcers and ulcers along the posterior wall of the duodenum may not be visualized, even with a technically satisfactory barium examination. Frequently the condition of the patient at the time of the acute hemorrhage makes a good study very difficult, and the presence of blood or clots in the gastrointestinal tract results in poor filling or coating of the stomach and intestine. As for the esophagus, it has been estimated that esophagrams reveal varices in from 30 to 50 per cent of cases.[2] Bleeding is said to originate from the small bowel in approximately five per cent or less of all cases of gastrointestinal hemorrhage.[3] In a group of 51 patients who had adequate preoperative roentgenographic studies of the small bowel, lesions were found in 43.[4] That was an unusually high return and must be attributed to the experience of the examiners and the performance of some special studies such as the small-bowel enema and the instillation of barium through a long intestinal tube. On the other hand, in a review of 72 cases of melena, no lesion could be found in 43 per cent, and in an additional 28 per cent only a probable cause was established.[5] In an effort to move the patients as little as possible, one investigator did gastrointestinal examinations in bed, with a portable apparatus.[6] In 25 per cent of 200 patients examined in that manner, no lesions were found, then or subsequently. Those results are comparable to those obtained by the conventional upper-gastrointestinal series.

Most of the time, acute gastrointestinal bleeding is due to a peptic ulcer, but other possible causes include esophageal and gastric varices, gastritis or duodenitis, hemangioma and varicosities of the intestine, polyp, tumor and Meckel's diverticulum, regional enteritis, diverticulosis, infarction, impacted foreign body and blood dycrasia.

In a series of animal experiments, Baum and colleagues demonstrated that one could visualize bleeding of 0.5 ml. per minute radiographically by injecting contrast material directly into the celiac or superior mesenteric artery.[7-10] Injection into the abdominal aorta was not satisfactory, since bleeding at the rate of 5-6 ml. per minute was required before it could be visualized. Of one group of nine patients the site of hemorrhage was correctly identified in five. The other four probably were not actively bleeding at the time of the study. Since that pioneering work, others have also successfully demonstrated the location of acute gastrointestinal hemorrhage.[11, 12] The bleeding sites that have been found include esophageal tears and varices, gastric and duodenal ulcers, and vascular malformations of the duodenum. In contrast to the conventional barium examinations, angiographic demonstrations are not interfered

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with by the small size of the lesion or the presence of blood clots in the lumen of the viscus.

At the University of Iowa hospitals four patients with acute bleeding have been studied by means of angiography, and the bleeding site was demonstrated in two of them.

TECHNIQUE

The patient must be actively bleeding, as manifested by hematemesis, melena, a continuing fall in hemoglobin or hematocrit, or hypotension requiring transfusion. Under local anesthesia, a precurved radiopaque catheter is inserted percutaneously into the femoral artery. The catheter must have a gentle lordotic curve corresponding to the course of the abdominal aorta so that the tip will face anteriorly. With the help of a fluoroscope equipped with an image intensifier, the tip of the catheter is inserted into the celiac artery, which usually arises from the aorta at the level of T 12-L 1. Proper catheter placement is checked by means of a small injection of contrast material, and the patient is then positioned over the rapid film changer. With a pressure injector, 30 cc. of methylglucamine diatrizoate (60 per cent Renografin) is injected in two to three seconds.

Frontal roentgenograms of the abdomen are taken at the rate of two per second for four seconds, and then at the rate of one per second for 11 seconds, thus covering a 15-second period from the beginning of the injection. While the films are being developed, the catheter is removed from the celiac artery and placed in the superior mesenteric artery, which usually originates from the aorta 1 to 2 cm. below the celiac artery. From 20 to 25 cc. of contrast material is injected into that vessel, and rapid serial films are again taken. Both sets of films are studied for a puddle of contrast material in a hollow viscus. If no abnormalities are seen and the patient is having melena but no hematemesis, selective catheterization and injection of the inferior mesenteric artery should also be attempted in an effort to demonstrate a site of bleeding in the left half of the colon. That vessel is much smaller than the celiac and superior mesenteric arteries, and probably no more than 10 or 15 cc. of contrast material should be injected into it. The patient is usually taken to surgery immediately after completion of the angiogram.

CASE REPORTS

Case 1. A 56-year-old woman was admitted because of hematemesis and epigastric pain. Three years previously a diagnosis of pancreatitis had been made at laparotomy, and a portion of the pancreas had been removed. A splenectomy had also been performed. At her present admission, her hemoglobin was 8.9 Gm. A nasogastric tube was passed, and some blood was aspirated from the stomach. Two days after admission, an upper-gastrointestinal examination was negative. On the following day the patient was actively bleeding, and a celiac arteriogram revealed a puddle of contrast material in the stomach (Figure 1). At operation there was diffuse oozing from the gastric mucosa, and several areas of bleeding were ligated. A gastrostomy tube was inserted, and a biopsy was done. It revealed atrophic gastric mucosa with acute hemorrhagic gastritis.

Case 2. A 44-year-old Negro man was admitted to University Hospitals because of weight loss, vomiting and abdominal pain. Three months previously a gastroenterostomy and vagotomy had been done to relieve gastric-outlet obstruction secondary to a chronic duodenal ulcer. A second operation shortly after his admission this time revealed a functioning gastrojejunostomy with a marginal ulcer in the efferent portion of the jejunum. The duodenal bulb was scarred, but no ulcer was found there. The gastrojejunostomy was taken down, and a jejuno-jejunal anastomosis was performed. A subtotal gastric resection was then done, with a Billroth I type of anastomosis to the duodenum. The patient did well until the twenty-first postoperative day, when he went into shock as a result of massive gastrointestinal bleeding. A celiac arteriogram revealed leakage of contrast material into the stomach (Figure 2). A third operation on the following day disclosed that an ulcer in the second portion of the duodenum was eroding into the gastroduodenal artery.

Case 3. A 34-year-old housewife had passed blood per rectum for two days prior to admission. Two years previously she had required a blood transfusion because of anemia. An up-

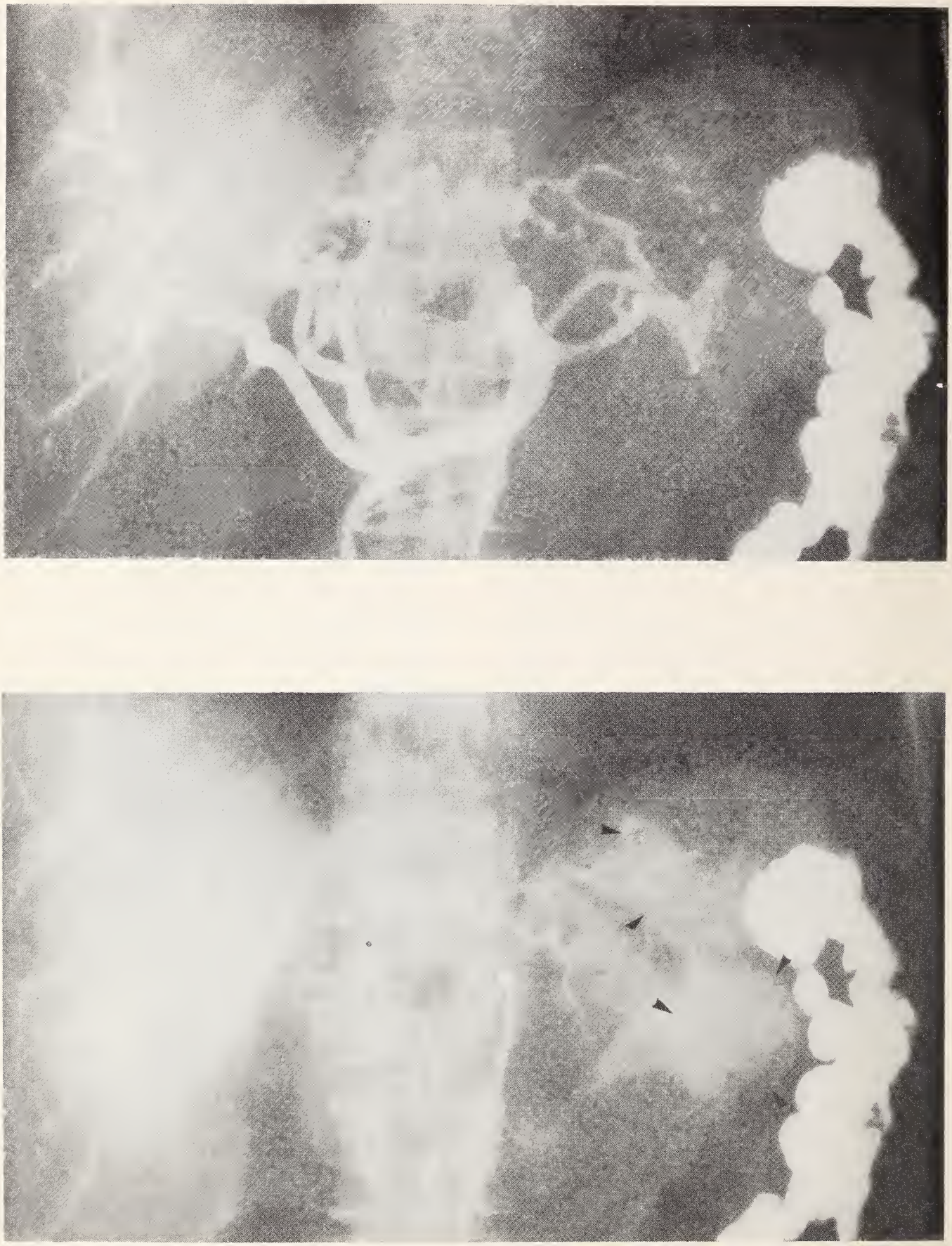


Figure 1. At the top is a selective celiac arteriogram. Three seconds after the beginning of the injection there is good filling of the celiac artery and its branches. The tortuosity of the intrahepatic vessels suggests the presence of cirrhosis. The splenic artery is small as a result of splenectomy. Residual barium is present in the colon. At the bottom is another such picture taken at five seconds. There is puddling of contrast material in the body and fundus of the stomach, indicating that active bleeding is occurring in the region indicated by the arrows.



Figure 2. At the top is a selective celiac arteriogram taken two seconds after the beginning of the injection. The celiac artery and its branches are well visualized. In the bottom picture, taken at six seconds, the arrows point to a collection of contrast material in the stomach, indicating the presence of active bleeding in that area. The stain remained after the contrast material had completely cleared out of the blood vessels.

per-gastrointestinal examination and a barium enema had been negative at that time. On the day of admission her hemoglobin was 8 Gm. A barium enema and sigmoidoscopy to 16 cm. were negative. On the next day, selective celiac and superior mesenteric arteriography did not reveal a bleeding site. Surgery on that same day revealed a leiomyoma of the ileum with ulceration. There was no active bleeding at the time of the operation.

Case 4. A 52-year-old woman was admitted to University Hospitals because of intermittent gastrointestinal bleeding of one month's duration. A gastrointestinal series revealed a questionable duodenal ulcer. Three days after admission, a laparotomy demonstrated blood in the small bowel distal to the pylorus. The duodenal mucosa was inflamed and bled easily to the touch, but no ulcerations were seen. The liver was shrunken and had an irregular surface. Pyloroplasty, vagotomy and liver biopsy were performed. Pathologic examination of the hepatic tissue disclosed periportal fibrosis, with foci of hemorrhagic necrosis.

Following the operation, the patient continued to have episodes of hematemesis and melena. A small-bowel series and a barium enema were negative. A celiac arteriogram did not show the source of bleeding. The hepatic vessels were tortuous and irregular, in a pattern consistent with cirrhosis.

An esophagram on the following day revealed esophageal varices, but the bleeding was not arrested by a Sengstaken-Blakemore tube. Because of the patient's generally poor condition, a repeat operation was not thought feasible. The patient expired 39 days after her surgery. Postmortem examination revealed cirrhosis of the liver with esophageal and duodenal varices. The entire gastrointestinal tract distal to the esophagus was filled with blood, but the source of bleeding could not be identified. The mucosa over the varices was intact, and no ulcerations or inflammation could be found in any part of the gut.

DISCUSSION

In the first patient, the selective celiac arteriogram correctly localized the bleeding to the stomach. Although there was some barium in the colon, it fortunately did not obscure the puddle of contrast material. Koehler[12] has suggested that angiography should precede a barium examination in patients with acute bleeding, so that the gut will be free of barium. As more hospitals acquire the necessary personnel and equipment, there probably will be a trend toward earlier angiography. However it must be kept in mind that a barium examination is considerably easier, it carries practically no risk and it enables the radiologist to make a diagnosis in 70-80 per cent of cases. Probably angiography should be reserved for those patients in whom a diagnosis cannot be made by the conventional examinations utilizing barium.

The second patient is unusual in that the angiogram demonstrated a puddle of contrast material in the stomach, though the bleeding was actually coming from the duodenum. However that man had had two previous operations on his stomach, with a resulting distortion of the anatomy. His most recent operation had been a subtotal gastrectomy with a Billroth I anastomosis. Since the pylorus was no longer present, it is reasonable to assume that contrast material leaking into the duodenum would have a tendency to reflux into the stomach, especially when the patient was lying on his back. This case illustrates the fact that the angiogram may not be absolutely accurate in pinpointing the bleeding site. Nevertheless the general area from which the patient was hemorrhaging was disclosed.

Angiography is especially useful in a patient who has been operated upon for gastrointestinal bleeding and in whom a source has not been found. Annes and colleagues[11] reported a case in which no blood was found in the stomach at operation. When bleeding recurred postoperatively, a celiac arteriogram revealed leakage of contrast material from high along the lesser curvature of the stomach. At reoperation, a shallow gastric ulcer was found and resected, and a cure resulted. It is well known that reverse peristalsis frequently occurs in patients with gastrointestinal hemorrhage, and that blood may be present in the stomach, even though the bleeding site is distal to it. However a bleeding gastric ulcer without blood in the stomach is more difficult to explain. Perhaps the stomach emptied itself, and the bleeding ceased just before the operation. Certainly in a person who has had negative

barium studies and laparotomy, angiography should be done as the next diagnostic procedure.

In the third patient, celiac and superior-mesenteric arteriography failed to locate the bleeding site. An operation was done soon afterward, and the ulcerated leiomyoma of the ileum which was found was not bleeding actively. It is likely that active bleeding was not occurring at the time of the angiogram.

The fourth patient remains an enigma, even after the postmortem examination. Although esophageal and duodenal varices were present, no bleeding site could ever be identified. The celiac arteriogram was useful only in confirming the diagnosis of cirrhosis by revealing tortuosity and irregularity of the intrahepatic arteries. Sometimes esophageal varices can be shown by celiac arteriography, but they were not demonstrated in this patient. On the late phase of the celiac arteriogram, the splenic and portal veins are frequently visible. If they are perfectly normal, without dilatation or backflow into collateral channels, esophageal varices are unlikely. Even if varices are identified, they may not be the source of the hemorrhage unless it can be shown that contrast material is leaking from them. The only angiographic sign which can be considered reliable is the escape of contrast material from a specific site into a hollow viscus.

SUMMARY

In patients with active hemorrhage from the gastrointestinal tract, injection of contrast material directly into the celiac, superior mesenteric or inferior mesenteric artery may reveal the site of bleeding. This new technique is especially useful when conventional studies have failed to reveal any abnormality. If hemorrhage recurs in patients who have been operated upon without identification of the bleeding site, angiography is recommended as the procedure of choice.

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Dr. Moyers Appointed Head of Anesthesia

Appointment of Dr. Jack Moyers as head of the Department of Anesthesia in The University of Iowa College of Medicine was approved on Friday, Mar. 15 by the State Board of Regents. The appointment was effective immediately. Dr. Moyers, a professor of anesthesia at the U. of I., had served as acting head of the department since last July. He has been a member of the College of Medicine faculty since 1951.

Born in Sidney, Dr. Moyers received a B.A. degree in 1943 and an M.D. degree in 1945 from the U. of I. He interned at Mt. Carmel Mercy Hospital, in Detroit, Mich., and served in the Navy from 1946 to 1948. He returned to the U. of I. in 1948 for graduate study in physiology and two years of specialty training in anesthesiology. Before joining the U. of I. faculty he spent one year in Copenhagen, Denmark, as an instructor at the Anesthesiology Training Center, sponsored by the World Health Organization and the University of Copenhagen.

Dr. Moyers is a member of the House of Delegates and the student preceptorship committee of the American Society of Anesthesiologists. He is a diplomate and an associate examiner of the American Board of Anesthesiology, and is a Fellow of the American College of Anesthesiologists. He is a member of the United States delegation to the World Federation of Societies of Anesthesiologists, a founder and extra-ordinary life member of the Scandinavian Society of Anesthesiologists, and a member of the International Anesthesia Research Society. He is affiliated with several other professional and scientific groups and is the author of more than 20 scientific articles in the field of anesthesiology.

Hirschsprung's Disease: Current Status

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ROBERT T. SOPER, M.D.
Iowa City

Congenital aganglionic megacolon (Hirschsprung's disease) occurs because of the absence of parasympathetic myenteric and submucosal ganglion cells, and generally is limited to the rectum or distal colon. Characteristically the disease is manifested by symptoms of partial colonic obstruction in the neonatal period, but the diagnosis is frequently delayed because of the confusing array of symptoms that partial obstruction produces in the very young. The incidence in the United States is approximately one per 5,000 children born.[5] Among the patients there is a strong preponderance of males, and a mild familial incidence. Also, the disease has a predilection for mongoloid children.[1]

HISTORICAL BACKGROUND

Following Hirschsprung's description, in 1886, of two patients with non-mechanical congenital colonic obstruction, there was much dispute about the etiology of the disease. In 1948 Whitehouse and Kernohan[8] correctly indicted aganglionosis as the cause, allowing Swenson[6] to devise a rational and physiologic corrective surgical procedure. It became apparent that treatment should be aimed at the aganglionic rectum and distal colon, rather than at the dilation and hypertrophy of the proximal colon, which is simply compensatory to the distal obstruction. Barium enema has been helpful in diagnosis, but both the ease and accuracy of diagnosis were greatly aided when transanal rectal biopsy was introduced.[7] Currently there are three basic corrective operations that have as their aim the resection and/or bypass of aganglionic bowel (Figure 1).

Dr. Miller is a resident in general surgery, and Dr. Soper is an associate professor of general surgery at the U. of I. College of Medicine.

PATHOPHYSIOLOGY

Defecation in the human being is initiated when stool passes into and distends the rectum. It triggers massive peristaltic activity in the colon, and normally occurs at least once a day. As the peristaltic waves sweep into the rectal ampulla, reflex relaxation of the anal sphincter mechanism occurs, and the urge to defacate becomes apparent. Stretching of the sphincter mechanism, and more specifically the levator ani muscles, initiates defecation, but voluntary control can prevent an inappropriate expulsion of rectal contents.

In Hirschsprung's disease, the lack of postganglionic parasympathetic innervation prevents the propagation of peristaltic waves in the rectum. Stool collects at the junction between ganglionic and aganglionic colon, which most frequently lies at the upper rectal or sigmoid level, and megacolon occurs proximally. After many years the distal aganglionic segment occasionally becomes passively dilated by the wedge-like pounding of stool against it, and there is a compensatory hypertrophy of the proximal colon. However the aganglionic segment in the young patient retains a constricted, spastic configuration because of the unopposed sympathetic innervation.

The clinical symptoms of congenital aganglionic megacolon develop as a result of the above-described mechanism, and they present

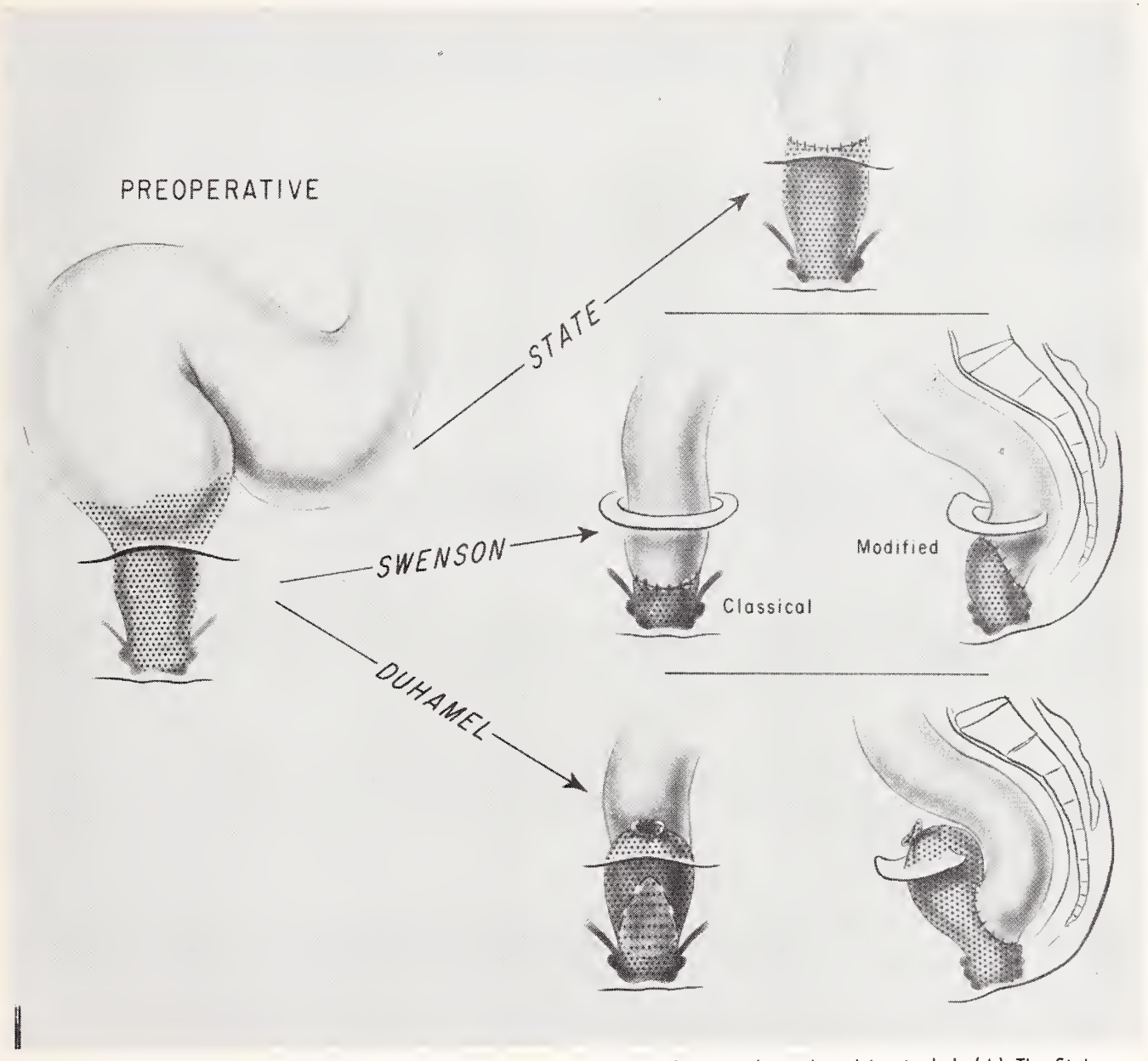


Figure 1. Three basic corrective operations for Hirschsprung's disease. The aganglionic bowel is stippled. (A) The State procedure is simply a low anterior resection of the dilated bowel and as much aganglionic bowel as can be removed from above. (B) The Swenson procedure resects almost all of the aganglionic bowel, and restores continuity by suture after eversion of the bowel ends through the anus. (C) The Duhamel procedure removes aganglionic bowel only to the peritoneal reflection, and bypasses the rest with a posterior colorectal anastomosis. Notice the "blind" rectal pouch and the retention of considerable colorectal septum.

as partial large-bowel obstruction. The obstructive symptoms of abdominal distention, vomiting, constipation and paradoxical diarrhea are common.

Occasionally a severe non-specific colitis occurs in the ganglionated bowel just above the transition zone, and the large volumes of stool cause erosion of colonic mucosa, hemorrhage, and fluid and protein loss into the bowel lumen. We have found this syndrome particularly lethal in infancy, but it has been described even after surgical treatment if some obstruction persists.[2]

SYMPTOMS AND DIAGNOSIS

Of 30 patients with histologically proved Hirschsprung's disease seen at the University of Iowa Hospitals over the past six years, 26 were males and four females. Four male patients had total aganglionosis of the colon. Their ages at diagnosis ranged from one day to 21 years (Figure 2).

By far the commonest symptom was constipa-

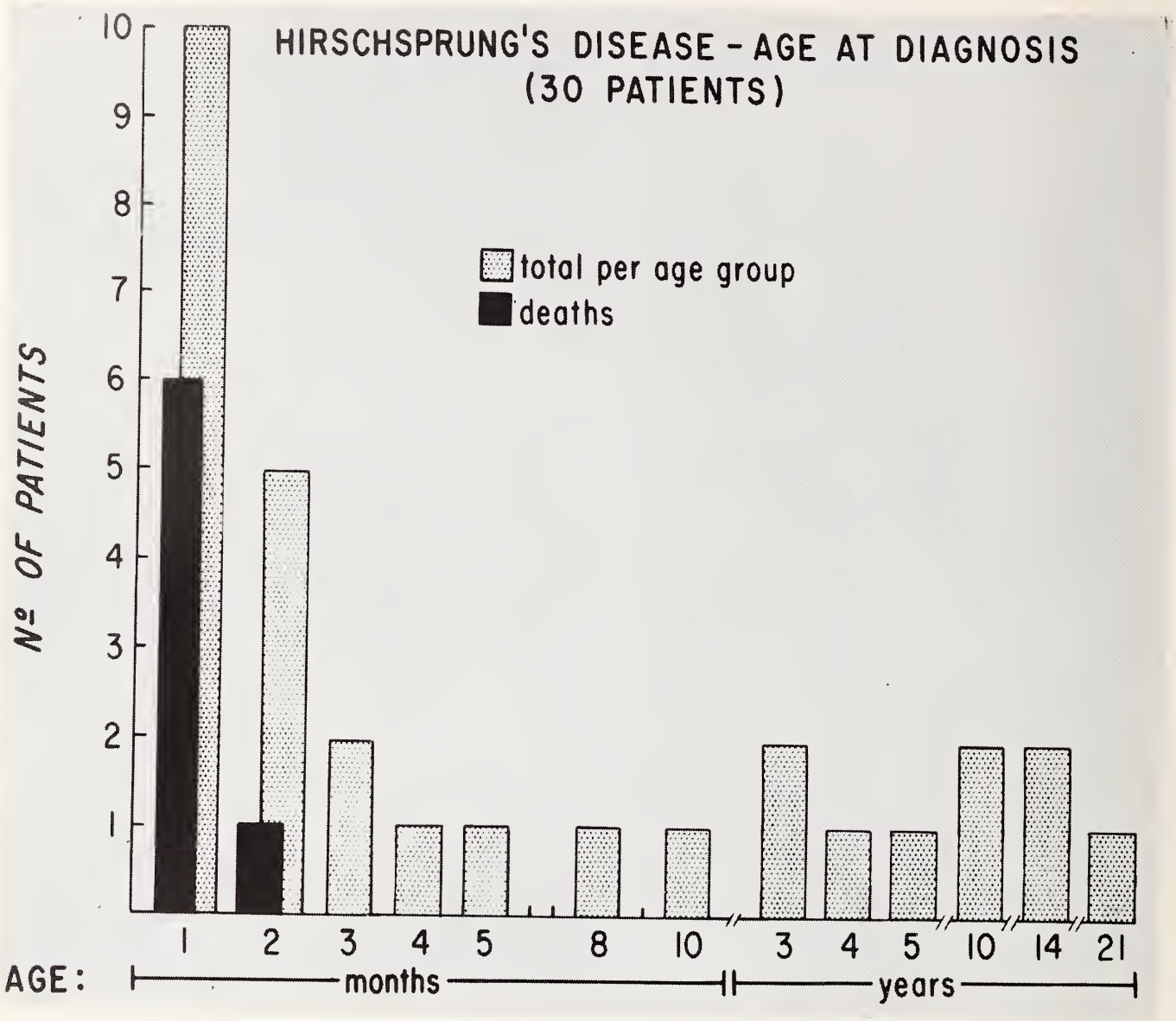


Figure 2. Most of these patients were diagnosed at young ages—10 of them in the first month of life (six of whom died); 15 of them at under two months of age (all seven who died were less than two months of age); and 21 of the 30 were less than one year old at diagnosis.

tion. It was present to some extent in all patients. However, patients who were symptomatic enough to require hospitalization during the first few weeks of life exhibited more severe and non-specific symptoms of intestinal obstruction: vomiting, diarrhea, feeding problems and "failure to thrive." Furthermore, all deaths occurred in that age group (Figure 2).

The absence of ganglion cells in the submucosal and myenteric plexuses was proved by transanal rectal-wall biopsy in 22 patients, by colonic-wall biopsy taken at laparotomy in five patients, and at autopsy in three patients (Figure 3). Liberal use of transanal biopsy led to diagnosis in two patients in whom the clinical picture was one of "functional constipation." In contrast, two newborns with suggestive clinical signs of colonic obstruction (abdominal distention and a delay in passage of meconium beyond 24 hours of age) had normal barium enemas, expulsion of which relieved the obstructive signs. Both infants were incorrectly thought to have the "meconium plug" syndrome, and rectal biopsy was not done. They returned later with lethal enterocolitis. Both of those deaths might have been pre-

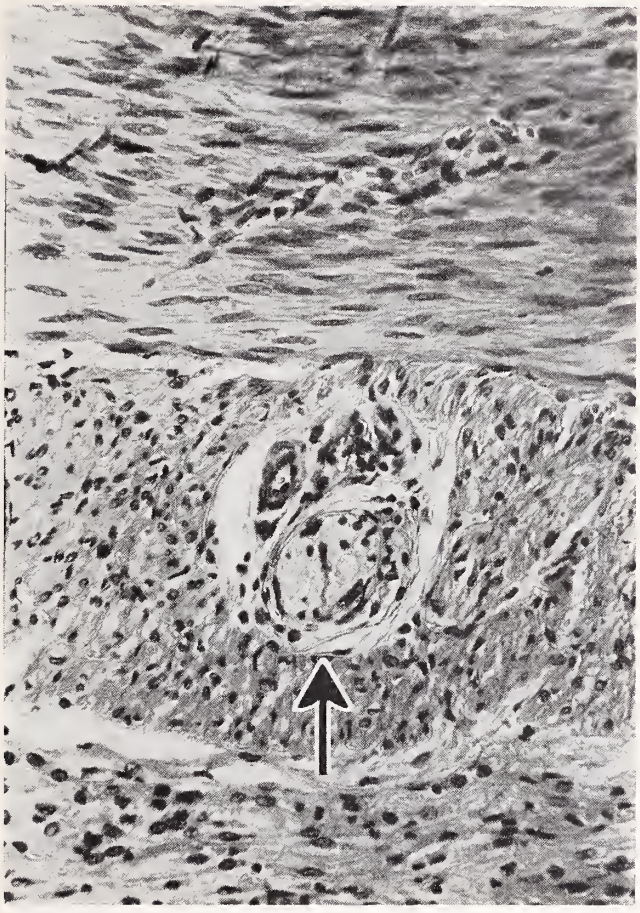


Figure 3A. Both this picture and the one at the right are high-power photomicrographs taken of the intermuscular plane of the rectum (H&E stain). The picture above shows Hirschsprung's disease. The arrow points to a large nerve trunk but no ganglion cells.

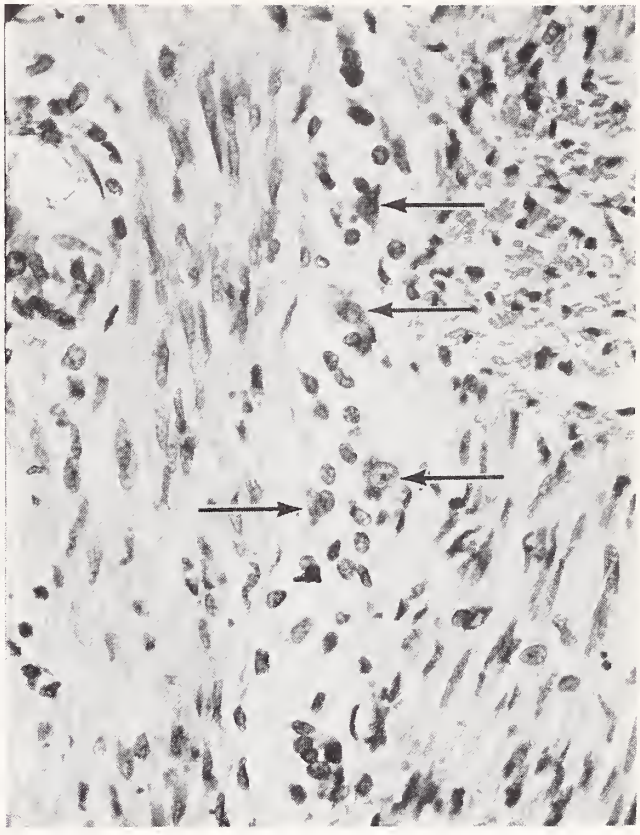


Figure 3B. Normal patient. The four arrows identify characteristic ganglion cells.

vented if rectal biopsy had been done at birth.

Forty barium enemas were performed in 27 patients. Half of them showed the classical findings of a narrowed aganglionic bowel distally and dilatation proximally, with a delay in expulsion of the barium. However in nearly 25 per cent of the examinations (mostly in young infants), the findings were not suggestive of Hirschsprung's disease. It often takes several days or weeks for the dilation of ganglionated bowel to occur, and radiologic diagnosis depends on it. Four patients with total aganglionosis of the colon had non-diagnostic barium enemas. These points underscore the need for transanal rectal-wall biopsy in anyone with unexplained gastrointestinal-tract symptoms that date from birth, regardless of the nature of the symptoms and despite a normal barium-enema examination.

COMPLICATIONS

Eleven of the 30 patients had complications related to Hirschsprung's disease (Table 1). Entercolitis occurred frequently in a mild form, and was severe in five patients, three of whom expired. Two were salvaged by early diagnosis, parenteral fluids and blood, saline irrigation of the colon, and colostomy. One patient who died of enterocolitis had aganglionosis of the entire colon.

Intestinal perforation, a catastrophic complication, occurred in two of our patients. One was saved when exploratory laparotomy revealed sigmoid perforation, and an exteriorizing colostomy was performed. The other had cecal perforation at the age of 24 hours, and despite colostomy died one day later from peritonitis. Both of those infants had conventional lengths of aganglionic colon.

We found that most patients were below normal weight if they were past the neonatal period at diagnosis. In only three patients was malnutrition directly related to mortality, but all of them had severe enterocolitis. Five pa-

TABLE 1

COMPLICATIONS OF HIRSCHSPRUNG'S DISEASE

	Alive	Dead	Total
Acute enterocolitis	2	2	5
Total aganglionosis		1	
Colon perforation	1	1	2
Malnutrition	9 of 18	4 of 7	13 of 25
Anemia (Hgb. < 10 Gm.%)	3	3	6
Hydroureter	1		1

TABLE 2

CAUSES OF DEATH IN HIRSCHSPRUNG'S DISEASE

Seven of 11 patients with complications	
Enterocolitis	3
Perforation	1
Malnutrition-sepsis	1
Aspiration pneumonia	1
Small bowel obstruction (postoperative)	1
Total	7

tients with enterocolitis were also anemic at the time of diagnosis.

MORTALITY

Seven of the 11 patients with complications died, producing a mortality rate of 23 per cent in this series (Table 2). Five deaths were the result of Hirschsprung's disease, and two died of other complications. Among those who died, there was a high incidence of associated congenital anomalies such as heart disease and mental retardation.

In this series three of the four patients with total colonic aganglionosis died. The sole survivor was diagnosed at age 9½ years and is doing well following a corrective operation. That survival points out that patients with Hirschsprung's disease who manage to live beyond infancy are able to compensate for the defect and may live to adulthood despite rather severe bowel dysfunction.

MANAGEMENT

Conservative management is not recommended at present because of the efficacy of surgical correction. However for various reasons five of our patients did not undergo corrective surgery. All were over 10 years of age at diagnosis, and fairly good symptomatic control had been achieved by means of enemas and laxatives. Diagnosis must be made histologically, and we prefer transanal rectal biopsy. This can be performed easily and safely on the smallest of infants (Figure 4). Barium enema frequently substantiates the diagnosis, and is helpful in predicting the extent of aganglionosis. Occasionally the diagnosis is made during a laparotomy undertaken because of severe symptoms.

Once diagnosis has been established histologically, colostomy is performed in ganglionated bowel for three basic reasons: (1) to relieve colonic hypertrophy and dilatation; (2) to treat or prevent the catastrophic complications of perforation and enterocolitis; and (3) to improve the patient's nutritional status. Definitive treatment is delayed until the patient is an optimal operative risk. Colostomy is obviated only in patients who have been diagnosed in the neonatal period and have no complications. In such cases the surgeon may proceed to an immediate corrective operation.

Several different corrective operations have been described, all of them aimed at removing or bypassing the distal aganglionic colorectum. We have modified the bypass procedure of Duhamel.[3, 4] The revised operation avoids the major objections to Duhamel's classical procedure by eliminating the "blind" rectal pouch and the entire colorectal septum (Figure 5). The resulting rectal segment is near-normal in appearance, and physiologic in function. In Figure 6 it is compared with the anatomic end results of two other popular operations for

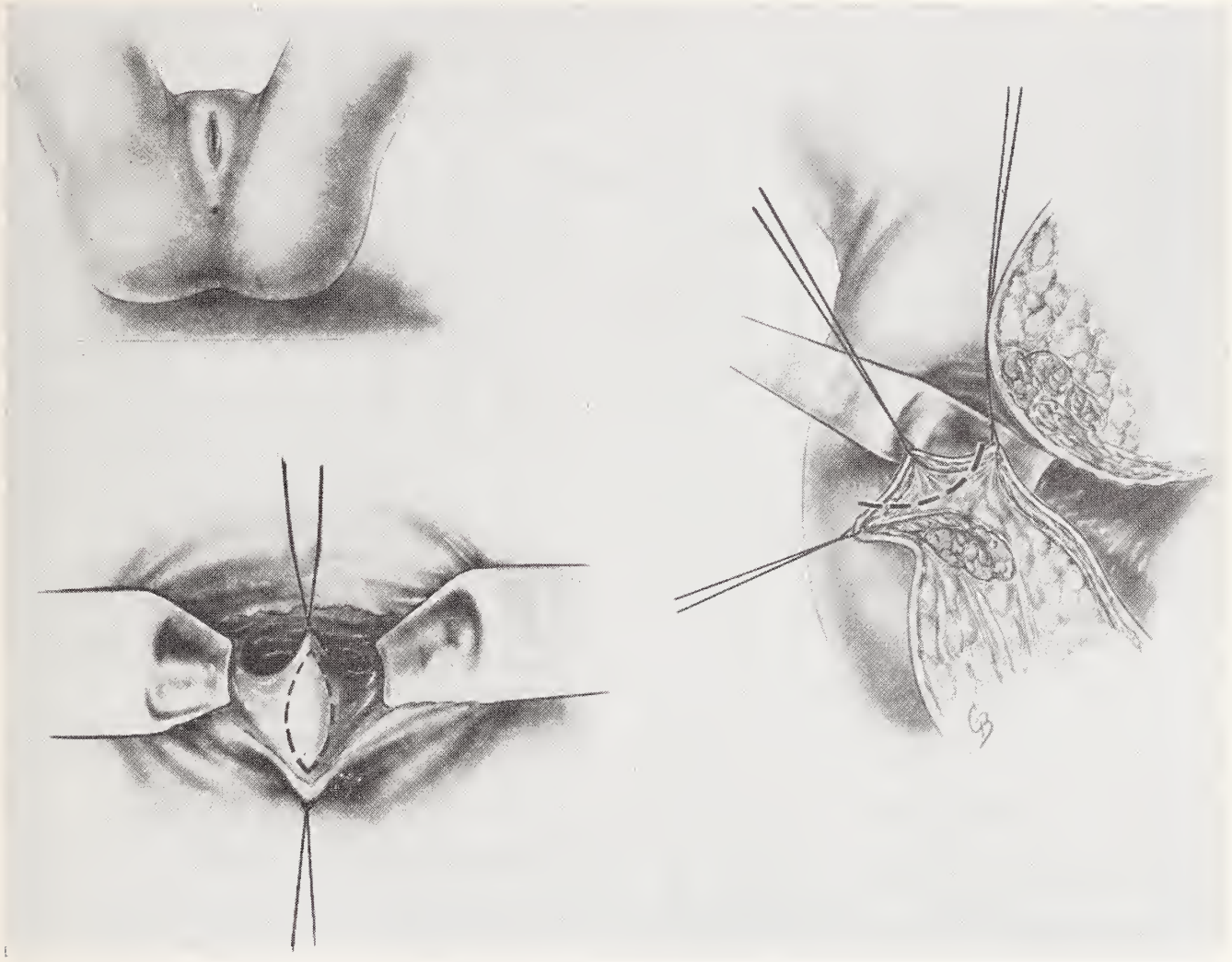


Figure 4. Transanal full-thickness biopsy of rectal wall. (A) Upper left: performed in lithotomy position. (B) Lower left: anal sphincter divulsed and retracted, and posterior rectal wall elevated by stay sutures above the anus. The ellipse marks the biopsy. (C) Right: full thickness of rectal wall elevated by stay suture in biospy. The biopsy is marked by the broken line and includes the rectal muscularis. Running locked stay sutures are used to close the biopsy site.

Hirschsprung's disease. Fourteen of the 30 patients in this series underwent the modified Duhamel procedure with no mortality and low morbidity.

RESULTS

In those patients who survive to undergo definitive surgery, the results are rewarding. No deaths have occurred in this group, and most patients can be toilet-trained and maintain relatively normal bowel habits. Early diagnosis and an aggressive attitude towards surgical correction provide the keystone for reduction in the disturbingly high mortality rate associated with congenital aganglionosis of the colon.

SUMMARY

An increased understanding of the pathophysiology of congenital aganglionic megacolon, in recent years, has led to a rational approach to treatment. The disease is characterized by symptoms of partial colonic obstruction that date from birth and tend to be more atypical and severe in the very young. Thirty patients diagnosed at University of Iowa Hospitals during the past six years have been reviewed, with emphasis on symptoms, diagnosis and complications. The overall mortality has

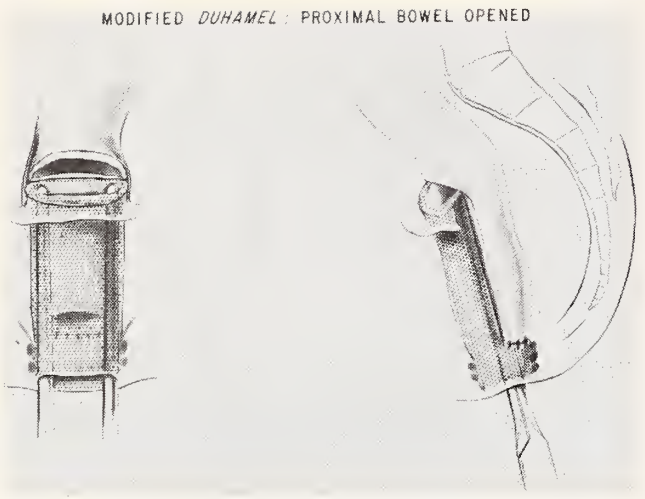


Figure 5. Intermediary step in performance of the modified Duhamel operation. After suture of the ganglionated bowel to the posterior rectum just above the anus, one places two Kocher clamps in order to devascularize and necrose the entire colorectal septum. Suture anastomosis of the anterior edge of the proximal rectum to ganglionic bowel will eliminate the "blind" rectal pouch.

been 23 per cent, and all deaths have occurred in patients under two months of age at diagnosis. A method of early diagnosis and rational management has been presented, together with a description of a modification of the classical Duhamel operation that has proved satisfactory.

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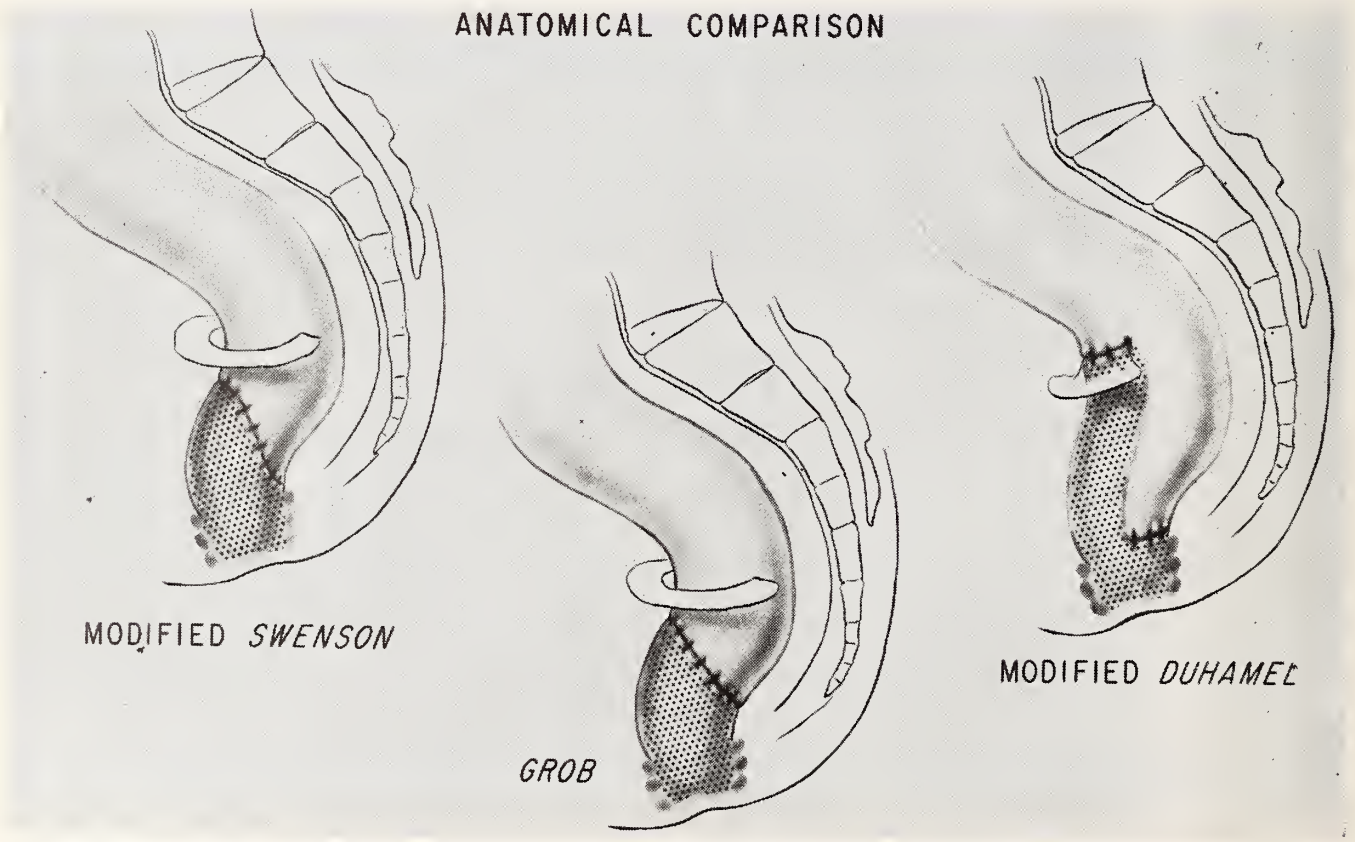


Figure 6. Anatomical comparison of the rectal segments following the Swenson, Grob and modified Duhamel procedures.

Aspects of Developmental Dyslexia

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CASE REPORT

S.F., THE SON OF A PHYSICIAN, was first seen at the age of 13 years, when he was in the seventh grade. He was failing in all of his school subjects. He was known to be a mediocre reader, but he also was thought to be of mediocre intelligence. He had been brought up in a permissive household, and he was rather lazy and seemed to show a lack of interest in school achievement. The diagnostic question posed was whether his school failure was due to intellectual limitations, to a poor reading ability or to a lack of motivation.

Examination disclosed that his intelligence level was more than adequate to give him mastery of seventh-grade work. His IQ on the Wechsler Intelligence Scale for Children (WISC) was 112. There was, however, a decided discrepancy between his score on the Verbal Scale (IQ = 103) and his score on the Performance Scale (IQ = 121). An interview with him indicated that he indeed had become increasingly uninterested in school, and that his assignments had become more and more difficult for him over the past three years. Diagnostic reading tests showed that his overall reading ability was on the third-grade level—i.e. four years below the expected level for his age and grade. Although he recognized all the letters of the alphabet, he did not know the phonetic value of many syllables, and his spelling was extremely poor. There was no evidence of a specific reversal tendency in his reading. He was strongly right-handed and he showed excellent motor coordination and good visuoperceptive capacity. Inquiry disclosed that an older brother, who was in college, had had a similar reading problem in grade school. The condition had responded fairly well to remedial instruction, but he had remained a mediocre reader and a poor speller, and he was experiencing difficulty in learning a foreign language. A maternal uncle also had had noteworthy difficulty in learning to read during his childhood. On the basis of those findings, the patient was judged to be an example of developmental dyslexia, and individual remedial tutoring in reading was recommended for him.

He received four hours of special instruction in reading per week during the next two years. On reexamination at the end of that period, he showed fifth-grade reading ability. Thus he had gained two years in reading achievement, but he still was four years below expectations. He was then experiencing extreme difficulty in keeping up with his ninth-grade schoolmates, and was showing conduct problems. The remedial instruction was continued. When reexamined a year later, at the age of 16 years, he showed a sixth-grade reading ability. Thus the course was one of steady progress, but the improvement was not rapid enough to overcome his disability in relation to his grade placement. By that time he was following his brother's example in planning to enter an occupation which would not make great demands on his reading and spelling ability.

INCIDENCE

The foregoing brief case report illustrates the condition that is the subject of this communication. Developmental dyslexia, or specific reading disability, was first described about 70

Dr. Benton is a research professor, and Dr. Sahs is a professor and the head of neurology at the University of Iowa College of Medicine.

years ago, at the end of the nineteenth century. Thus, as medical history goes, it is a relatively recent discovery among language disorders. In contrast, aphasia has been known since time immemorial—virtually for as long as man has enjoyed the gift of speech. Acquired dyslexia (i.e., specific loss of reading ability as a consequence of cerebral disease in adulthood) was first described about 2,000 years ago. However for one reason or another, developmental dyslexia escaped the attention of physicians and teachers.

One reason that is often advanced for their failure to recognize this disorder is that universal literacy is a comparatively new social phenomenon. It is argued that in the days when the majority of people were illiterate there was scarcely an opportunity for specific reading disability to manifest itself. But that argument can apply only to a recognition of the disorder among the uneducated. It is well known that developmental dyslexia is no respecter of social classes and that there certainly is no dearth of cases among children of middle-class backgrounds. These dyslexic middle-class children were also not identified as such. From biographical and historical studies, one gathers that these children were considered simply dullards. Since their apparent stupidity barred them from careers in the truly learned professions such as the law and the church, they occasionally were shunted off into the pursuits that were considered less demanding from an "intellectual" standpoint, such as medicine and surgery. Apparently one such "dullard" was the great John Hunter.[1]

These historical considerations have a possible bearing on a phenomenon which one encounters in considering developmental dyslexia, namely its apparently greater prevalence in Northern Europe and the United States than in Italy and Spain. This has been remarked upon a number of times. For example if one reviews the world literature on the subject he finds that about 70 per cent of the reports are in English (including some contributions from Scandinavian countries); about 15 per cent are in German; and about 10 per cent are in French. Italian, Spanish and Portuguese contributions form about 1 per cent of the total. Even today the disorder is almost unknown to Italian neurologists and psychiatrists. The stock explanation that is offered for this apparent difference in prevalence between the North and the South of Europe is that, in contrast to the considerable inconsistency that is found in English, the Italian and Spanish languages are characterized by such a consistent relationship between the graphic symbol and the sound it represents that learning to translate visual stimuli into their phonetic equivalents poses no difficulty to the Italian or Spanish school child. However it would seem that such a proposition is not very convincing. A linguistic difference of that sort might help to explain differences in the *average* level of reading ability among various national groups, if such differences existed. But it is difficult to see how it could be made to account for the persistent, severe and often intractable failure to learn to read, the condition which is called "developmental dyslexia." As a matter of fact, the actual prevalence of developmental dyslexia in a country like Italy is unknown. There are no standardized tests of reading achievement that might facilitate comparisons among the different schools. All one can learn from the testimony of teachers and the results of the usual subject-matter examinations, is that there certainly are considerable variations among individual pupils in the development of reading skills. An objective and systematic study of reading achievement in the "middle schools" of Milan (i.e., those corresponding roughly with our fourth through seventh grades) is currently being done, and it should provide a basis for a more intensive investigation that should answer the question. In the meantime, one must consider the possibility that the apparently low prevalence of developmental dyslexia in countries like Italy and Spain is due to the fact that physicians and teachers simply have failed to recognize the disorder there.

CLINICAL FEATURES

One difficulty which has plagued the field for 50 years, and which has been the source of much confusion, is the lack of a reasonably precise definition of developmental dyslexia, one that is generally accepted by clinicians and researchers. It is no more than one type of reading disorder. In comparison with other types of reading failure, it has certain distinctive fea-

tures, all of them of a negative nature (except, of course, for the basic positive feature of reading retardation). This is true, unfortunately, because at the present time the primary positive features are unknown. The diagnosis of developmental dyslexia is essentially a diagnosis by exclusion.

The features of developmental dyslexia may be stated as follows:

(1) Developmental dyslexia is *not* failure to learn to read by reason of general mental deficiency. The mental defective is, of course, a "retarded" reader, but the reading disability of such an individual is usually only one of many symptoms of his general intellectual impoverishment. It must be emphasized, however, that developmental dyslexia can occur *within a setting* of generalized mental deficiency. The disorder does not respect intellectual level, although its particular manifestations may vary as a function of general intelligence.

(2) Developmental dyslexia is *not* failure to read because of a major visual defect that deprives the graphic symbol of its stimulus value.

(3) Developmental dyslexia is *not* failure to learn to read because of an auditory defect which results in a gross impoverishment of speech sounds.

(4) Developmental dyslexia is *not* failure to read because of inadequate schooling, a situation which is frequently seen among culturally-deprived children.

(5) Developmental dyslexia is *not* failure to learn to read on the basis of infantile neurosis, where it may function as a symptom of anxiety or one which has conscious or unconscious reward value to the child.

The child with developmental dyslexia usually is a boy who is intelligent, who is endowed with normal vision and hearing, who has received adequate conventional instruction in reading, and who—at least at the beginning of his schooling—had a normal motivation to learn to read.

That definition is more or less the same as the one formulated by James Hinshelwood, the Glasgow ophthalmologist who was the pioneer worker in the field.[2] Hinshelwood drew a careful distinction between developmental dyslexia and the various other conditions in which partial or complete failure to read occurred (e.g., low intelligence or a sensory handicap). He emphasized that what he called the "purity of symptoms" was a basic definitional characteristic of developmental dyslexia and was essential for its diagnosis. But Hinshelwood's careful definition was generally ignored, with the result that the enormous literature purporting to deal with developmental dyslexia actually deals with poor reading ability that has occurred at the consequence of any one of a variety of different factors—physical, intellectual and social. It is scarcely surprising, then, that this literature is a mass of contradictions, and that after one has reviewed it, he finds that he has a dearth of reliable information.

What is known about developmental dyslexia? What are its correlates? What are its determinants? Despite several decades of intensive study, the essential nature of the disorder still remains a puzzle. Yet the literature provides a number of suggestions, some of them more promising than others.

Disorders of visual function subtler than mere impairment in visual acuity have been investigated with the idea that they might be significant correlates. Disturbed eye movements, visual-field restrictions and poor visual habits have been studied, but little has come from those studies, and there is general agreement that dyslexia is not primarily an ophthalmologic problem. On the other hand, *a higher-level visuoperceptive defect* expressed in poor integration and retention of received visual-sense data is still a popular concept. That idea goes back to a classical study by Fildes, some 40 years ago, which is still quoted with respect and in which it was reported that poor readers showed disabilities in visual-form discrimination, visual memory and perception of spatial orientation. However, that venerable study was really not quite relevant to the question. Over half of Fildes' presumably dyslexic subjects had IQ's below 70, and the intelligence level of his control group was not specified. Had Hinshelwood's criteria been respected, no study would have been possible, since 80 per cent of the children in it had IQ's below 80.

The study by Fildes was only the beginning. Since then there have been scores of investigations devoted to the question of whether dyslexics show higher-level non-linguistic visuo-

perceptive impairment. Analysis of the mass of literature leads one to the conclusion that there is little evidence for the idea that this type of impairment is significantly associated with the persisting specific disability that we designate "developmental dyslexia." To be sure, inferior visual-form perception, visuomotor skill and directional sense are sometimes associated with reading retardation in young school children (i.e., those in the first, second and third grades). However that association disappears, or at least is greatly attentuated, in older dyslexic children. It seems, therefore, that the importance of these factors as determinants of persistent dyslexia in children of adequate intelligence has been greatly exaggerated.[3]

Higher-level auditory disability has also been implicated on occasion. Some dyslexic children show defects in both understanding and producing oral speech. They do poorly on tests of auditory verbal discrimination. On the expressive side, they show articulation difficulties and even may produce paraphasic speech. Their auditory memories, as assessed by retention of digits, words or sentences, may be poor. These are not very frequent defects; they are seen only in a minority of dyslexic children. It is possible that they occur as a *consequence* of the dyslexia, since surely there are interactive effects between written and oral speech. However it is conceivable that children with this constellation of deficits form a specific subgroup of dyslexics, a subgroup in which the manifest dyslexia is one expression of a more generalized language disorder. These children often have histories of (1) delay in acquiring oral speech, (2) motor awkwardness and (3) anomalies in handedness.

This consideration leads us to the question of the role of *handedness and cerebral dominance* in dyslexic children. This is one of the most difficult interpretive problems that we face. On the other hand, the greater-than-chance association between deviant-handedness and reading disability is probably the most securely established empirical fact in the field. It is impossible to deny it, despite the occasional publication of negative findings. On the other hand, only a small minority of dyslexics actually show deviant-handedness. The majority are clearly right-handed. It is simply that dyslexic children show a higher incidence of left-handedness or mixed-handedness than do their peers in the general population. Or to put it the other way, a smaller proportion of dyslexic children are clearly right-handed as compared with children in the general population. It is impossible to give precise figures in this regard, since they depend upon the particular criteria one uses in arriving at judgments of deviat-handedness. The trend of findings, however, is that deviant-handedness (i.e., something other than clear right-handedness) is two to three times more frequent in dyslexic than in normal children. Thus, for example, if deviant-handedness, as defined by a particular set of criteria, is found in 5 per cent of children in the general population, it will be found in 10-15 per cent of dyslexics. But, of course, one is left with 85-90 per cent of dyslexics who are clearly right-handed.

Here the field has suffered from all-or-none thinking, and there has been a long series of publications, some concluding that anomalies of handedness are an important determinant of dyslexia, and others denying it any importance whatsoever. Zangwill,[4] who has given the problem careful study, has advanced a reasonable, if not necessarily correct, solution. He proposes that there is a specific subgroup dyslexics who are characterized by deviant hand preference (hence by a lack of established hemispheric cerebral dominance for language), by motor awkwardness, by relatively poor oral speech, and by poor visuoperceptive and visuomotor abilities. How large a subgroup such individuals constitute is an open question. It probably would not account for more than 30 per cent of dyslexics, and possibly for as few as 10 per cent.

Another mechanism which has been postulated as underlying developmental dyslexia is the notion that despite the fact that both higher-level auditory and visual processes are intact, there is a *failure of integration* between them. This is a fairly old idea. In 1917 Augusta Bronner[5] raised the question of whether "in reading there is not involved some subtle synthetic process which at the present time we have no means of studying, but defects in which are of extreme significance." In short, the concept is that the mechanism underlying dyslexia is an inability to associate visual and

auditory stimuli, rather than faulty perception in either sensory modality. This concept served as the guiding hypothesis in a recent study by Birch and Belmont,[6] who examined the performances of normal and dyslexic children on an auditory-visual equivalence task—i.e., one that required the child to match a given auditory stimulus with a subsequently presented visual stimulus. Their findings suggested that some dyslexic children do have particular difficulty in forming these auditory-visual equivalences.

Working in the Laboratory of Neuropsychology at the University of Iowa Hospitals, Beery[7] has done a replication and an extension of the Birch-Belmont study. Developing somewhat more demanding tests for intersensory integration and providing for a stricter control of the intelligence variable than Birch and Belmont had, she investigated visual-auditory as well as auditory-visual matching. Her results showed that some dyslexic children perform quite poorly at this task, and that their performance level is below that of the entire distribution of control children. This is an approach to the problem that deserves further exploration.

Many other concepts, mechanisms and disabilities have been suggested. One is the concept of a disorder of the body schema or body image. In the hands of the older neurologists, this concept had a more or less precise significance, and served as an explanation of certain observed phenomena. For example Pick utilized it to explain the gross mislocalizations of body parts by patients with diffuse cerebral disease as well as the persistence of the phantom limb in amputees. Head employed this theory to explain awareness of the positions of body parts and the capacity to localize stimuli on the skin surface. But gradually the concept has been broadened so that it denotes far more than the spatial image or unconscious schema of the body which those early workers had in mind. Now it is employed to cover any and all reactions associated in one way or another with the body, including emotional and valuistic reactions, and acceptance or rejection of the body. Thus the concept of body image has come quite close to being a global term that sounds impressive but means very little because it means too much. In any case, critical examination fails to substantiate the claim that dyslexic children show disorders of the body schema. Dyslexic children show no special difficulty in localizing tactile stimuli applied to the body surface or in identifying body parts, including the fingers. Some of them do show defects in right-left orientation.[8] This may be considered under the rubric of general orientation, which is discussed below.

Rabinovitch[9] has emphasized the relative frequency with which disturbances in orientation are seen in dyslexic children. At this point, a definition of *orientation* may be in order. Orientation means the capacity to transform a percept into a concept, the latter being expressed in symbolic terms. We perceive and discriminate among linear extents, and transform those percepts and discriminations into the symbolic concepts of inches, feet, yards and miles. We perceive weight and transform it (not always accurately) into such units as ounces and pounds. We perceive and discriminate temporal durations and order events along a temporal dimension, and at the same time work with temporal concepts such as the time of day, the day of the week, yesterday, today, tomorrow, etc. Dyslexic children show no particular difficulty in the *perception* of length, time, height or weight. However some of them show extraordinary weakness in the *conceptualization* or *symbolization* of those perceptual experiences. They may know the days of the week, but are unable to tell when the week "begins" or "ends." They are incapable of naming the months of the year, or of saying, in answer to a question, whether July is in the summer or in the winter. A dyslexic boy who was seen recently said the average American woman is seven feet tall! Professionals who are psychoanalytically inclined can make of that what they will, but the fact is that non-dyslexic boys do not say that. Another boy, one who had been brought to Iowa City from a town 25 miles away, stated in response to questions that it had taken 40 minutes for him to get to the hospital and that it was 150 miles from his home town to Iowa City. Both of those boys, one 10 and the other 11 years old, had WISC IQ's of just over 100.

It is within this context that disturbances in right-left orientation can be considered. Dys-

lexic children have no particular difficulty in discriminating one side of the body from the other. There seems to be nothing faulty with their body schema (or, more precisely, with the right-left gradient of the body schema). However some of them show a mislabelling of the two sides of the body.[10] They consistently show left body parts when asked to show the right, and vice versa. In response to double commands, they will, for example, put the right hand on the left ear, instead of putting the left hand on the right ear as requested. This very consistency indicates their intact discrimination from a strictly somatoperceptual standpoint. At the same time, it points to the symbolic or conceptual nature of their disability. That their impairment is of a conceptual nature is also indicated by their frequent failure to change orientation when they have to point out lateral body parts on the confronting examiner. This is not perceptual failure, but symbolic-linguistic weakness.

ETIOLOGY

Thus far we have been considering the behavioral correlates and the possible psychological mechanisms underlying dylexia. We may turn now to the problem of causation. The first question to be raised is whether there is a hereditary factor in developmental dylexia. Instances of multiple occurrence of the disorder in the same family were noted quite soon after the publication of Hinshelwood's first papers. Since then, case reports describing the disability in two brothers, in father and son, in uncle and nephew, etc. have appeared from time to time.

In addition, one notes that developmental dyslexia is preeminently a disease of males, being at least four times as frequent in boys as in girls. This speaks for some kind of sex linkage that, one supposes, could have a genetic determination. More recently, systematic studies of substantial groups of cases, such as that of Hallgren,[11] have disclosed a remarkably high incidence of reading disability in the relatives of these children. Finally, studies of twins show a practically perfect concordance of the disorder in pairs of identical twins and about a 33 per cent concordance in fraternal twins.

All this is in consonance with the general clinical impression. When one questions the parents of dyslexic children about the reading abilities of various members of their families, an impressively high number of positive cases turn up—e.g., an older brother had significant difficulty, or an uncle could not get through high school but subsequently has exhibited good intelligence, as evidenced by success in farming or business.

Hereditary causation thus seems a likely possibility, although it has not been demonstrated unequivocally, and one has little idea about the proportion of cases in which heredity may play a role. The crucial studies have yet to be done. If one assumes that here is hereditary causation, the next question concerns the nature of the genetically transmitted factor or factors. As yet there is no answer. Whatever it is, it may be presumed that it finally expresses itself in some kind of neurologic anomaly. We still have no idea what that neurologic anomaly may be.

Early workers in the field, such as Hinshelwood, postulated a lack of development or maldevelopment of the posterior parietal and occipital areas of the dominant hemisphere. That was an obvious analogy to acquired word-blindness in adult patients with cerebral disease, where the responsible lesion is typically found in the region of the angular gyrus of the left hemisphere. That concept had to be revised as new knowledge about the cerebral dominance in children was gained and it became apparent that a presumed maldevelopment of an area in a single cerebral hemisphere (even the one that was destined to be "dominant" in later life) could not serve as an organic basis for the disability. The revised concept postulates a bilateral involvement of the parieto-occipital region. This theoretical possibility has been advanced by Geschwind,[12] and he points out that the region of the angular gyrus matures postnatally and rather late in life. Indeed, he says, it seems plausible that in some children it remains undeveloped. That is purely conjectural, however.

TREATMENT

This presentation would be incomplete without at least a brief comment about the problem of treatment. It has become increasingly apparent that the typical remedial program in a

public school, consisting of from one to four hours of special instruction per week, is an inadequate remedy for the difficulty. It is true that some children make significant progress under that arrangement, but it is not unfair to say that the majority do not. They progress at a snail's pace that brings no feeling of real accomplishment to the child, the teacher or the parents. We must accept the fact that the boy with a severe reading disability has a profound handicap which has not been alleviated by years of conventional instruction or by such special education as the school has been able to provide.

Obviously the condition requires more intensive treatment. That would imply a major special educational set up—not merely a minor appendage to the regular classroom work, but a set up in which remedial efforts are focused on the child's disability for as long as four to six hours each day on five or six days each week.

This is not the place for a discussion of the specific nature of the remedial work that should be offered. Ideally, however, in contrast to the usual trial-and-error approach, the special training procedures should have a firm basis. Obviously the training procedures will stand or fall in terms of the practical results that they accomplish. As in all other clinical research, only through theory-testing within the setting of clinical service will progress be made in the development of rational and effective remedial methods.

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Dangerous 'Health Club' Reducing Programs

The American Medical Association has issued a word of warning concerning commercially promoted "clubs" for weight losers. "Since excess weight may be a symptom of illness, it is vital for any person who wants to lose weight to have a physical examination by his physician before participating in any of these so-called club programs," the AMA sad.

Several such clubs are now in operation. They are frequently operated locally by a businessman who has obtained a franchise from a national headquarters organization.

"The regimen and rapport of group 'workouts' that are being commercially promoted throughout the country may give the overweight person some moral support for his effort at weight reduction and little else," the AMA said. "The group approach may be satisfactory for the person who wants to lose a few pounds and can afford the fee charged by a club.

"The group approach that does not include a complete, preliminary physical examination and medical supervision is definitely not satisfactory for the person who is significantly overweight, or who plans to lose 15 per cent or more of his total weight. Significant weight reduction must be carried out under the supervision of a physician."

The AMA commended the American public for its increased interest in health, including weight reduction. Properly prescribed and properly supervised diet and exercise regimens have been encouraged by the AMA for many years. "There is in the overweight population, however, a higher incidence of hypertension, cardiovascular and kidney diseases, disorders of the liver and gallbladder, and diabetes mellitus," the AMA noted. "Sudden loss of significant amounts of weight, or the requirement for an unusual amount of exercise, may be hazardous for the patient with any of these conditions.

"Adequate treatment of obesity (significant overweight) is often a more complex matter than diet and exercise, the usual club regimen. While simple over-eating and under-exercising may be a cause of obesity, significant overweight frequently has a genetic, metabolic or psychological component which requires medical diagnosis and treatment. Because there is no single cause of obesity, there is no single proper treatment to correct it."

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 494
Alcoholism, Ascites, Coma

RAYMOND F. SHEETS, M.D., Chairman,
CPC Committee
MRS. REBECCA FRIEDMAN, CPC Secretary

SUMMARY OF CLINICAL FINDINGS

A 54-YEAR-OLD WHITE MALE CARPENTER was admitted to University Hospitals for the first time with a history of drinking quantities of whiskey varying from a half-pint per day to a half-pint per week for many years. Five months before admission, he had changed to drinking only beer, and had drunk up to a six-pack per day until two weeks before admission. He had been in good health, however, until four weeks before admission, when he had noticed increasing tiredness, shortness of breath on exertion, and vague abdominal pains that were followed shortly by a diarrhea which persisted for a few days. He attributed all his symptoms to "the flu," and quit working. The symptoms slowly subsided, but a week later he noted jaundice, his urine "looked like coffee," his stools became lighter in color, and his feet and abdomen began to swell. He became increasingly short of breath, and needed two pillows in order to sleep comfortably at night. Immediately before his arrival here, he gained 25 lbs. of body weight. He denied any exposure to a jaundiced patient, he said he had received no injections or transfusions during the past year, and said he had taken no medications. He stated that he had never before been jaundiced or had abdominal distention.

On admission, physical examination revealed a well-nourished, well-developed but obviously jaundiced white man, who was well oriented and cooperative. His blood pressure was 125/95 mm. Hg, his pulse was 120/min. and regular, and his respirations were 24/min. and labored. Examination of his head and neck revealed scleral icterus, but was otherwise unremarkable. Examination of his chest and heart was negative, except for gynecomastia. The liver edge was felt four fingerbreadths below the right costal margin, and was nontender. No spleen was palpable. The abdomen was distended with marked ascites, and a fluid wave was present. His testicles were atrophic. Four plus pedal edema extending to the midcalf was noted. Deep-tendon reflexes were increased symmetrically, but no pathologic reflexes were present.

He was treated with Mercuhydrin, Aminophylline and Furosemide, and over the succeeding two weeks he lost 26 lbs. from his admission weight of 198 lbs. He was then noted to be hypotensive, he had a decreased urine output, and he complained of marked abdominal pain. Treatment with Levophed, hydrocortisone and antibiotics was started, and shortly thereafter he was transferred to the Intensive Care Unit. At the time he was moved there, his blood pressure was 50/0 mm. Hg, his pulse was 120/min. and regular, and his respirations were normal. The skin was icteric, but no palmar erythema or spiders were noted. Shifting dullness was detected in his abdomen. The liver was 16 cm. in total breadth. The edge was smooth and nontender. Bowel sounds were absent. There was no

lymphadenopathy. His extremities were cyanotic. A nasogastric tube was inserted, and it returned guaiac-positive coffee-ground material.

Following rehydration and the raising of his central venous pressure to normal, he was given mannitol and ethacrynic acid in an attempt to increase his urine output. He became markedly hypothermic (temperature 91°F., rectally), and he was placed on a thermal blanket. Even with high doses of pressors his blood pressure remained at 60 mm. Hg systolic. He developed a liver flap, and the odor of fetor hepaticus was present. He received three units of whole blood and four units of plasma. His hemoglobin and hematocrit stabilized, and the nasogastric tube returns became guaiac-negative. His prothrombin time remained 5-6 sec. above control, despite vitamin K_1 administration. Following rehydration, his weight increased to 188 lbs., but his abdominal girth remained constant at 42 in. His bilirubin continued to rise. He became irrational, confused and then comatose, and he died three days following his admission to the Intensive Care Unit.

CLINICAL DISCUSSION

Dr. R. F. Sheets, Internal Medicine: Miss Raps will discuss the protocol for the students.

LABORATORY TEST RESULTS

VDRL: nonreactive

Cultures

- Day 2 Urine, no growth
- Day 2 Sputum, normal flora. Beta hemolytic Streptococcus, not group A
- Day 5 Ascitic fluid, Pseudomonas aeruginosa
- Day 9 Stool, normal flora absent; Candida tropicalis, pure culture
- Day 12 Ascitic fluid, no growth
- Day 17 Blood × 2, no growth
- Day 20 Ascitic fluid, no growth

Other laboratory data

- Serum amylase × 3: less than 59u.
- Platelet count, 70,000/cu. mm.
- Stool guaiac at admission: 1 +
- Cytology on ascitic fluid: no abnormal cells
- EKG: low voltage
- 24-hr. urine urobilinogen, 0.9 mg./TV
- Liver scan using Au^{198} revealed very little tracer uptake on the right lobe, with colloid localization on the left lobe suggestive of diffuse parenchymal damage
- Serum protein electrophoresis
 - $Alpha_1$ 0.8 Gm.
 - $Alpha_2$ 0.9 Gm.
 - Beta 0.6 Gm.
 - Gamma 1.2 Gm.
 - Total protein 5.4 Gm. per cent; albumin 1.9; globulin 3.5

Day	BUN Mg%	Creat. Mg%	CO2 mEq/L	Na mEq/L	K mEq/L	Cl. mEq/L	Alkaline Phosphatase Units	Bilirubin Mg% Indirect/Total	SGOT Units	LDH Units
1*	20	1.3	15	131	3.2	94	9.2	3.3/12.0		
2									45	600
5			26	132	3.6	94		5.9/12.7		
7										
12				140	5.6		4.7		35	
17	85	2.5	29	132	3.4	101			74	690
18	100	4.2	10	125	4.6	84		5.4/10.6	840	
19	105	5.4	18	137	4.8	87		9.9/17.6		
20				126	4.7			11.3/21.6	120	

Day	SGPT Units	NH_3 Mg%	Hb Gm%	Hct %	WBC Per Cu. Mm.	E & R	Phrothrombin Time Seconds Patient/Control
1				45			
2	26	108	14.2	48	21,000	7	14.6/11.9
7		167					
12			13.0	45	24,000	8	13.8/12.5
19		92	14.0	43	22,000		19.9/12.9
20							20.8/12.7

* Day 1 equals day of admission to University Hospitals.

Miss Carolee Raps, junior ward clerk: The student discussion today will deal mainly with the lesions capable of producing the signs, symptoms and laboratory studies seen in this patient. He had a long drinking history approximating alcoholism. That, in itself, would lead us to suspect hepatic insufficiency due to alcoholic cirrhosis. His history of drinking doesn't, however, include any binges prior to his symptoms of malaise, shortness of breath and abdominal pain. It is probable that the alcohol alone may have caused enough liver damage to produce those symptoms and to result in jaundice later. The ascites and pedal edema that he developed before admission were consistent with cirrhosis, and the physical findings of gynecomastia, enlarged non-tender liver, and atrophic testes were also consistent with alcoholic cirrhosis.

Although ethanol could explain the presenting illness, it is possible that there was an acute insult to an already malfunctioning liver. It may have been a mild viral hepatitis, an obstructive lesion within the liver, a Budd-Chiari syndrome with thrombosis of hepatic veins, or a malignancy interfering with liver function. The patient's first symptoms, followed by jaundice one week later, were consistent with the usual course of mild viral hepatitis. Against hepatocellular damage due to hepatitis were the normal levels of serum glutamic oxaloacetic transaminase (SGOT) and serum glutamic pyruvic transaminase (SGPT). Obstructive lesions, intra- or extrahepatic, are favored by the relative increase of conjugated over unconjugated bilirubin. Biliary obstruction usually results in an elevated alkaline phosphatase greater than 12 Bodansky units. The patient's alkaline phosphatase on admission was 9.2, but later there was a decrease to 4.7 units, which tends to rule out biliary obstruction. Also, serum electrophoresis did not show the characteristic rise in beta globulin that is found in biliary obstruction. Another factor negating complete obstruction was the normal urine urobilinogen. The Budd-Chiari syndrome or thrombosis of the hepatic veins is found occasionally in cases of cirrhosis or hepatic malignancy. A partial thrombosis with resulting hypoxia could cause enough hepatocellular damage to account for the patient's slight rise in lactic acid dehydrogenase (LDH). The incidence of hepatoma is increased in cirrhosis. Hepatoma could explain the initial signs and symptoms by increasing cellular destruction, obstructing the canaliculi and possibly producing malignant emboli.

The patient's laboratory values on admission and up to the hypotensive episode were compatible with hepatocellular disease. Some obstructive component was indicated by the bilirubin values. That is, the liver function during the first 12 days of his hospitalization was depressed, but acute cellular necrosis, indicated by the rise in SGOT, occurred only after the hypotensive episode. The sudden rise in serum ammonia levels that occurred just prior to the shock episode may have been indicative of a portal-systemic shunt. The patient's gastrointestinal bleeding may have been from esophageal varices secondary to portal hypertension. The thrombocytopenia may have been secondary to his liver disease. A bone-marrow study might have been helpful in this connection.

Failure of the liver to produce fibrinogen, prothrombin and other clotting factors may also have accounted for the bleeding. Alcoholics are extraordinarily susceptible to peptic ulcer, but in this instance an ulcer was unlikely because the bleeding stopped with the administration of blood and plasma.

Other diseases capable of complicating this case were considered. An exfoliative carcinoma was ruled out by the absence of abnormal cells in the ascitic fluid. Acute hemorrhagic pancreatitis was ruled out by the repeatedly normal amylase values. The absence of lymphadenopathy or splenomegaly enabled us to exclude infectious mononucleosis or lymphomas, although internal lymphomas remained a possibility. The patient's last days were characterized by shock and renal insufficiency, with oliguria, uremia and coma.

The patient went into shock approximately two weeks after admission. That may have been due to any of a variety of causes, many of which cannot be ruled out on the basis of the protocol. These were ascites with poor tissue perfusion, hypovolemia aggravated by the diuresis, bacterial or fungal septicemia, or encroachment on the hepatic veins or inferior vena cava by a malignancy. Congestive heart

failure was unlikely because his central venous pressure was low. Septicemia was not supported by the blood or ascitic-fluid cultures. Pulmonary emboli from blood thrombi or a neoplasm were a possibility that seemed negated by the low central venous pressure.

The renal failure was probably caused by the shock. Further evidence favoring renal and liver malfunction was provided by the fall in the patient's CO_2 and the increase in his serum bilirubin, creatinine and blood urea nitrogen. The metabolic acidosis may also have been secondary to the circulatory failure and a rise in the lactic acid. Terminally the patient developed fetor hepaticus, liver flap, mental changes and a loss of consciousness—all of them characteristic of hepatic coma.

In conclusion, we believe this man had an initial problem of alcoholic cirrhosis, but we are unable to rule out hepatoma, Budd-Chiari syndrome or metastases from an occult neoplasm, as complicating factors. He developed hepatocellular necrosis, with hepatic failure, shock, acute renal failure and hepatic coma, and died as a result of them.

Dr. Sheets: Dr. Mason will discuss the case for the staff.

Dr. Edward E. Mason, Surgery: I agree with the student discussant almost completely, except that I have the feeling that the disease progressed too fast for cirrhosis, and that the "something more" that was involved here most likely was a hepatoma.

A few moments ago I asked about the patient's fever and was shown his temperature curve. He had an oral temperature of around 100°F., and more than the usual diurnal variations—all of which would be consistent with a hepatoma. He had an alkaline phosphatase that was too high in relation to his bilirubin, and that disproportion would also be consistent with a hepatoma. His serum albumin was much too low for the usual patient with cirrhosis, but instead it suggests hepatoma. The uptake of colloidal radioactive gold showed that there was an absence of uptake in the right lobe of the liver and disorganized uptake in the left lobe, suggesting hepatoma. Patients with cirrhosis do have hepatomas; in fact they are about 40 times commoner in people with cirrhosis than in the general population.

I should like to review with you some of the hydrodynamics of the circulation of the liver. For that purpose I shall use a Wheatstone bridge (Figure 1), with arterial pressure on one side and inferior vena cava pressure on the other side.[1] The pre-sinusoidal liver blood flow is normally toward the liver, but if there is enough disease and obstruction in the liver, the flow may be reversed. In the patient with cirrhosis, reversal of portal blood flow is suggested by a return of arterial blood pressure to normotensive from previously hypertensive levels, according to David Schwartz.[2] Reverse flow occurs in the portal vein when collaterals such as large esophageal varices appear. The result is similar to the one achieved experimentally by transecting the vena cava and the portal vein, and then anastomosing them crossways so that systemic blood goes into the sinusoids supplying the liver, and intestinal blood goes around the liver. When this happens, the liver apparently starts to produce angiotensinase. Angiotensin is no longer active, and if the patient has had essential hypertension, he then has a fall in blood pressure. I have gone into this because I notice in the protocol that this patient had a blood pressure of 125/95 mm. Hg, suggesting that he did not have advanced cirrhosis, esophageal varices or reversed portal blood flow. I would suggest that the pathologist may have found arteriolonephrosclerosis.

In addition, I think the cause of the patient's ascites was obstruction in the hepatic-vein area, because experimentally ligating the hepatic veins produces severe ascites.[3] I should guess that the hepatoma probably obstructed the hepatic veins more than it obstructed other parts of the circulation in the liver. As the pressure built up in the sinusoids, there began to be a weeping of fluid through the capsule of the liver, causing the ascites.

When the patient was admitted, his abdomen was full of fluid. He was treated with Mercuhydrin, Aminophylline and Furosemide, and he lost 26 lbs. in two weeks. That raises the question whether diuretics ever contribute to the hepatorenal syndrome. I think it would be worthwhile for us to review that question. Sherlock, Senewiratne, Scott and Walker[4] reported a series of patients treated with diu-

retics, and observed that quite a few of them developed markedly disturbed electrolyte and fluid balances. Other investigators have found diuretics to be safe if properly used. Lieberman and Reynolds,[5] at County Hospital in Los Angeles, have a ward devoted to the care of patients with cirrhosis and ascites. In the course of two years they were able to study 355 patients. They found that 25 died of functional renal failure. Nineteen of those 25 had received diuretics, but only six of them actually had responded to the diuretics. From that experience they did not feel that diuretics have any direct toxic effect on the kidneys. They then selected 43 patients who had normal BUN's but did have ascites, and studied their glomerular filtration rates, renal plasma flows, creatinine clearances, plasma volumes, etc. before and after a two-week diuretic course produced 20-lb. weight losses. Those 43 patients were treated like our man, as far as the diuretics were concerned. Lieberman and Reynolds found that there was a 6 per cent decrease in plasma volume and an 11 per cent decrease in creatinine clearance. There was no decrease at all in PAH clearance. They felt that the diuretics had not been toxic to the kidneys.

I want to take a moment to talk about renal function in cirrhosis. Schedl and Bartter[6] came to the conclusion that the patient with cirrhosis has a defect which causes increased sodium absorption in the proximal convoluted tubule. Normally, isotonic absorption of fluid and electrolytes occurs in the proximal convoluted tubule, and then in the ascending loop of Henle there is a pumping of sodium out of the nephron that leaves a dilute solution in the distal convoluted tubule. This, they said, is the way in which the kidney is able to excrete free water, or to excrete more water in relation to electrolytes than is present in the extracellular fluid. In a patient with cirrhosis, just as in the patient with cardiac failure and in the patient who has undergone a major operation, there seems to be an effective decrease in extracellular fluid, and of course it also involves the interstitial fluid in the kidney. Probably as a result, there is an increased reabsorption of sodium from the proximal convoluted tubule, and very little sodium is left to be pumped out of the ascending loop of Henle. This, in addition to the increased secretion of aldosterone by the cirrhotic patient, is another way in which sodium and water retention occurs. Under these

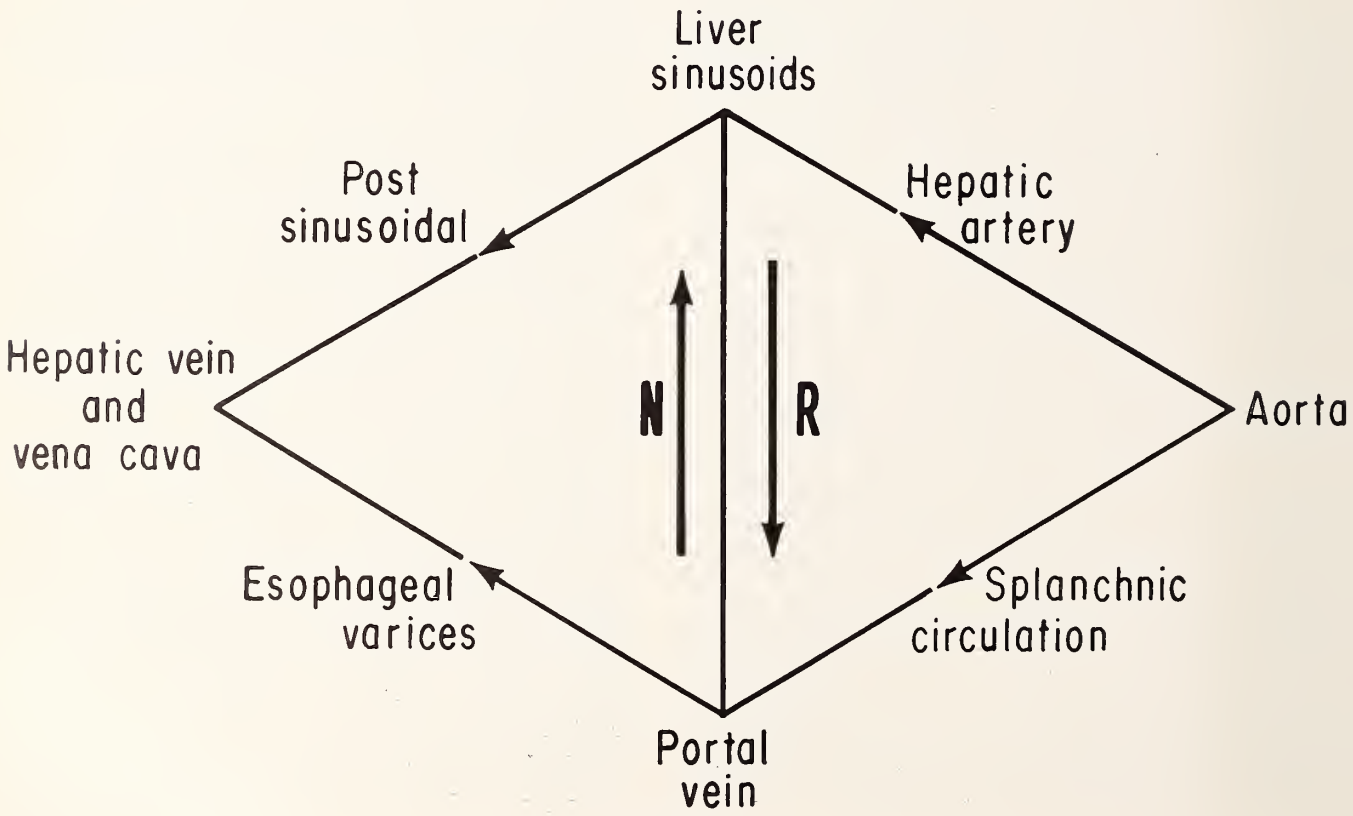


Figure 1

circumstances—and this is the work that Schedl and Bartter reported—you can use mannitol to decrease the reabsorption of sodium in the proximal tubule, so that sodium does get to the distal tubule. A normal countercurrent concentrating mechanism can function, and if there is increased aldosterone, it can have a chance to work in the distal part of the nephron. This is the way in which mannitol is supposed to function in a cirrhotic patient, when sometimes other diuretics will not work.

Mannitol was given to our patient late in his course, but by that time he had been so depleted that he no longer had adequate renal circulation, and under those circumstances mannitol was ineffective. Walker[7] studied 15 patients who had renal failure and jaundice, by putting a catheter into the renal artery and another one into the renal vein, injecting a dye into the renal artery and measuring renal blood flow. In the patient with jaundice who ceases to put out urine and who, like our patient in his later days, has functional renal failure, he found that the renal blood flow is reduced to about 40 per cent of normal. Given a patient with severe liver disease who has a defect in his renal function to begin with, and who has a period of ischemia from depletion of extracellular fluid, I think there is a great likelihood that organic renal failure will develop. In a few such patients, we do see acute tubular necrosis at autopsy, but there is not any evidence to indicate that any of the diuretics have had any direct toxic effect on the kidney. The hepatorenal syndrome probably comes about because the patient has been depleted of extracellular fluid, has an inadequate circulating blood volume and has ischemic damage. The type of kidney damage which occurs is not peculiar to cirrhosis or to jaundice. I think probably the pathologists will not have found very much to interest them in the patient's kidneys, although there may have been a little tubular damage.

Terminally, the patient became comatose. Hepatic coma is another problem that is ill defined, but probably it is related to increased ammonia in the brain. That is not always well correlated with the blood-ammonia levels. What sometimes happens is that patients with severe liver disease hyperventilate and develop a respiratory alkalosis. In the presence of an alkalosis, the ammonium ion—the means by which ammonia is usually carried in the blood—is converted to the gas NH_3, and NH_3 can cross the blood-brain barrier. Ammonium does not cross the blood-brain barrier, but with a respiratory alkalosis or an alkalosis produced by diuretics or in some other way, ammonia is formed and it can cross the blood-brain barrier. Normally there are about 60 mcg./cu. mm. of ammonium ion in the brain. Ammonium has to be removed by glutamic acid, which is present in large amounts in the brain, but the glutamic acid may be used up, and then the ammonium actually rises and coma results. There are other causes of coma in severe liver disease, and for them I refer you to a paper by Zieve.[8] One of the things that happens is that there is an accumulation of short-chain fatty acids, and it has been shown that one can cause coma by injecting short-chain fatty acids into an animal. The electroencephalographic changes which then occur are very similar to the electroencephalographic changes that take place in man in hepatic coma.

About 40 per cent of coenzyme A is present in the liver, and if there is severe disturbance of liver function, it is not surprising that the fatty acids begin to pile up. At the same time, these patients do not seem to have the ketosis that one might expect, for coenzyme A is necessary for the production of ketone bodies. These patients tend to develop hypoglycemia.

You will notice that when this patient came into the hospital, his respirations were 24/min. and labored. I should not be a bit surprised to learn that he had a respiratory alkalosis at that time. That is the typical finding in severe liver disease, even in a patient who is not in coma.

I shall summarize what I think may have been found. The patient probably did have cirrhosis. He had a large hepatoma with—if it can be demonstrated—obstruction of the hepatic veins. I wonder whether we might look at the liver scan to see whether it shows what might be a hepatoma in the right lobe. I also should like to see the chest x-ray, because 42 per cent of patients with hepatoma have metastases to the lung.

Frederick L. Benoit, III, M.D., Nuclear Medicine: The imaging of the liver by radioisotopic means is conventionally done in two fashions.

The first method to be described uses rose bengal labelled with I^{131}, and is based on the physiologic principle that the radiopharmaceutical is selectively localized in the polygonal cells of the liver and is excreted through the biliary tract. Subsequently, it has been found more practical to use a radioisotopic colloidal agent that is localized in the reticuloendothelial system of the liver. This patient had such a study done with Au^{198}, which is a colloid and is injected intravenously.

For reference, I should like to show a normal liver scan done on another patient with Au^{198} (Figure 2). It is an anterior view showing the normal silhouette of the liver, with the isotope uniformly distributed throughout the organ. In general, there is less isotope present in the left lobe of the liver because there is less thickness of tissue there and the isotope concentration is not so great as in the right lobe. The other view obtained routinely is the right lateral (Figure 3). It shows the isotope uniformly distributed except in the lower portion, where the tissue thins out. In contrast, the liver scan done on the patient whom we are discussing today, which was also performed with colloid Au^{198} (Figure 4), shows virtually no isotope concentration in the right lobe of the organ. The isotopic concentration in the left lobe would be more consistent with the normal, for a greater density can be noted than in the right lobe. The right lateral view (Figure 5) again shows what might be considered a normal concentration of isotope, but there is a suggestion of a decreased amount of radioactivity in the anterior portion. In cirrhosis generally, the isotopic concentration in the entire liver is diffusely decreased, its concentration is nonuniform, and usually one cannot visualize a normal-appearing left lobe. I think these scintiscan studies would be consistent with a space-occupying lesion in the right lobe, and probably would be compatible with cirrhosis. A neoplasm would be less likely because of the relatively normal amount of isotope noted in the left lobe of the liver.

Dr. W. N. Cohen, Radiology: The patient's initial chest radiograph was negative. Subsequently, a small, left pleuritic reaction developed. Examination of the abdomen reaffirmed the presence of ascites.

Dr. Henry E. Hamilton, Internal Medicine: Did the lateral view of the chest show elevation of the diaphragm?

Dr. Cohen: No, I don't believe so. It was pretty unremarkable.

Dr. Sheets: Dr. Mason says cirrhosis with a hepatoma. Any questions? Dr. Kent, would you show us the autopsy findings?

Dr. Thomas H. Kent, Pathology: This man did have a neoplasm—a very rapidly growing neoplasm. From the information I have, I should say that it probably arose in the gallbladder, or possibly in the hepatic or common duct. There was extensive spread around the gallbladder, around the upper common duct, around the hepatic ducts and in the liver. It had replaced approximately 70 per cent of the liver. I don't have an accurate enough description to determine whether it was more prominent in the right lobe than in the left, but from the external pictures it appears to



Figure 2. Anterior view of a normal liver scan performed with colloidal Au^{198}, which is selectively localized in the reticuloendothelial system of the liver.

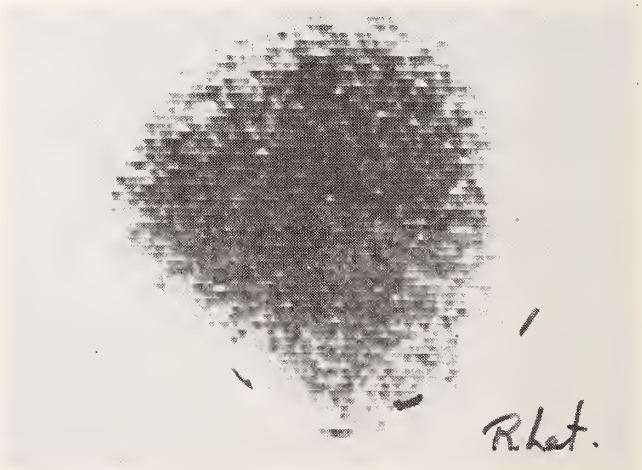


Figure 3. Right lateral view of a normal liver scan.



Figure 4. Anterior view of the liver scan in the patient under discussion. Note the virtual absence of radioactivity in the right lobe, and the increased or near-normal concentrations in the left lobe.



Figure 5. Right lateral view of the colloidal Au^{198} liver scan in the same patient. The overall isotope density is decreased in area, but an otherwise uniform concentration can be seen.

have been fairly diffuse. I don't know whether it compressed the hepatic vein or not.

There were microscopic metastases in the lung, in the peritoneum, in the adrenal glands and in some nodes from the abdomen. There was evidence of portal hypertension in that there were 4,000 cc. of ascitic fluid. The spleen was large, weighing 390 Gm. There was jaundice, of course. Another acute lesion was acute pancreatitis. The other findings were incidental.

The kidney changes were a little bit difficult to interpret. There probably was some mild tubular damage, with some dilatation of the tubules, a little bit of hydropic degeneration, and a little bit of bile in the tubules, but that was difficult to interpret postmortem, for the kidneys were somewhat autolyzed. The lower end of the gallbladder was encased in tumor mass. Both the right lobe and the left, from the external view, showed extensive areas of tumor infiltrate.

The gallbladder contained many gallstones of various sizes. The bile duct coursed down to its opening in the duodenum, and again there was tumor in the liver. The wall of the gallbladder was extensively infiltrated by a poorly differentiated carcinoma. The tumor did not form recognizable structures. The nuclei were very abnormal, and the cells did not clump well. The liver was extensively replaced by that very poorly differentiated neoplasm, which showed extensive necrosis, and the adjacent liver showed considerable congestion and necrosis. It was difficult to evaluate for the presence of cirrhosis, but as far as I could tell, there was no significant cirrhosis. The extreme activity of the tumor was indicated by its many mitotic figures, some of them quite abnormal. The nuclei were very large and curiously shaped. There was a very small metastatic clump in the lung.

In the pancreas there was an area of extensive fat necrosis, and at the margin between the necrotic area and the normal pancreas there was a rather acute inflammatory reaction, with many polymorphonuclear leukocytes. That pancreatitis must have developed terminally, since the patient's amylase values had been normal. I don't know when the last such test was made, and I think it would be interesting to find out.

A finding I cannot explain consisted of some focal calcification of myocardial fibers. It does not appear to have been the type of metastatic calcification that is usually prominent in the gastric mucosa, the kidney and the lung. It was not present in those areas. There was also an adrenal cortical adenoma, which is a common incidental finding.

I should like to make a few remarks about carcinoma of the gallbladder, its incidence and its course. Carcinomas of the gallbladder constitute from 0.2 to 0.5 per cent of malignancies found in autopsy series. If one considers cholecystectomy specimens, he finds carcinomas in from 0.8 to 3.7 per cent of gallbladders that have been removed surgically. We have had considerable experience with tumors of the

biliary tree at Iowa, and those cases have been reviewed by Dr. DenBesten and Dr. Liechty. Thus we have some statistics from our own institution which are interesting. Over a period of 30 years, from 1930 to 1960, there were 141 cases of carcinoma of the gallbladder, or approximately five cases per year. Last year, Dr. Buckwalter's Tumor Registry statistics showed that we had four new cases. For carcinoma of the biliary tree, 65 per cent of the Iowa series arose in the gallbladder. Sixteen per cent were in the ampulla of Vater; 12 per cent in the hepatic ducts; and 7 per cent in the common duct.

Those statistics may be a little bit misleading, for sometimes it is difficult to determine the exact site of origin of the tumor, as it was in the present case. Many cases of carcinoma of the pancreas may really be carcinomas arising in the common bile duct, so that carcinoma of the common bile duct perhaps is more common than it seems to be, and is often called carcinoma of the pancreas.

The prognosis in neoplasms of the biliary tree is very poor. About 10 per cent of patients present with operable lesions, and the operable lesions usually are early ones in the ampulla of Vater in which jaundice appears as a very early sign, or ones of the gallbladder which are found only incidentally. In the Iowa series of carcinomas of the gallbladder there were nine cures, and eight of them were incidental, small papillary tumors found at cholecystectomy. Ones that present very serious symptoms have a very poor prognosis. The patient usually dies promptly. Diversion of the bile into the intestine sometimes may lengthen his life for a few months.

The relationship between carcinoma of the gallbladder and gallstones has interested many people, and it is not by any means settled whether they play a causal role in the production of carcinoma of the gallbladder. Approximately 80 per cent of patients with carcinoma of the gallbladder have gallstones. The sex incidences for carcinoma of the gallbladder are comparable to those for gallstones. In other words, there are three female patients for every male patient. It is a disease that is very uncommon in people under age 50, and in fact most patients are over 60 years of age.

Pathologically, carcinoma of the gallbladder is usually a well differentiated adenocarcinoma. It usually has spread extensively by the time it is diagnosed, for it produces symptoms late. The principal routes of spread are first along the cystic duct to involve the common and hepatic ducts. Second, it spreads directly, probably through the lymphatics, and invades the liver extensively. Third, it may produce distant metastases, particularly in the lymph nodes and the lungs. This is a disease with a very dismal prognosis.

Dr. Hamilton: Might the calcification of the myocardium have been caused by a trichinosis infection acquired many years earlier?

Dr. Kent: The calcification was in the myocardial fibers, and striations could actually be seen in them. In trichinosis one would see a cyst.

Dr. E. A. Orzeck, Internal Medicine: Amylase was measured in the ascitic fluid obtained by a paracentesis three days before the patient's death, and it was less than 53 units. A serum amylase drawn two days before his death was 59 units.

Dr. H. P. Schedl, Internal Medicine: How often is an acute pancreatitis seen in a patient who is dying of liver disease?

Dr. Kent: I can't give you any statistics, but it seems to me that such cases are not infrequent.

Dr. Richard D. Eckhardt, Internal Medicine: I think this a very significant case in that most people who have cirrhosis, including those who die of their liver disease or its complications, are not deeply jaundiced. The vast majority have either no jaundice at all or only mild jaundice. Thus, when one sees deep jaundice in persons with known cirrhosis, he must strongly suspect the presence of other illnesses such as this patient had. It is true that cirrhotic patients can have deep jaundice, especially in association with marked fatty infiltration of the liver, or with so-called alcoholic hepatitis or florid cirrhosis, but they are the rare exceptions. Most cirrhotics, including those who die, are seldom more than mildly jaundiced.

Dr. Mason: There is a condition called Zieve's syndrome that occurs in cirrhosis, in which it is supposed that the patients don't excrete bilirubin because the liver can no longer conju-

gate it. I have thought that the deaths of some of the severely jaundiced patients on whom we have done shunts probably were on that basis.

Dr. Eckhardt: Those were people with marked fatty infiltration?

Dr. Mason: Terminal cirrhosis.

I should like to ask whether anyone feels there is any benefit in trying to get rid of ascites as vigorously as was done here.

Dr. Eckhardt: Because one seldom dies from fluid in his belly or in his legs, I think that rigorous diuretic therapy usually is unnecessary. We sometimes are over-impressed with the potentials of new diuretics, and perhaps the younger people on the staff treated this patient's ascites with more enthusiasm than older ones might have shown. Yes, I should say that ordinarily it would be better to go somewhat slower.

Dr. J. A. Gius, Surgery: I wonder whether Dr. Kent would care to elaborate on the relationship between the acute pancreatitis and the portal hypertension with splenomegaly and gallstones that were found in this patient.

Dr. Kent: There is no evidence in the protocol other than a mention of splenomegaly and ascites, and I did not personally see the autopsy. As for a relationship to pancreatitis, I have no comments. What did you have in mind?

Dr. Gius: I was wondering whether there might have been something about the common duct-pancreatic duct relationship that set the stage for pancreatitis.

Dr. Kent: Certainly pancreatitis is especially common in patients with gallbladder disease, but it usually is chronic pancreatitis, though I assume it has been acute at some stage. I cannot suggest a mechanism by which this patient developed pancreatitis terminally.

Dr. Eckhardt: Did this man have any primary liver disease?

Dr. Kent: Not that I could tell, but the liver had been badly damaged by the tumor, and it was necrotic and very congested terminally. I could see no evidence of cirrhosis.

Dr. Sheets: Could you tell why he had high pressure in the portal system?

Dr. Kent: I assume that the neoplasm certainly could have impinged on the portal vein, but I have no documentation for that. From its location, I should think it would block the portal vein before it got to the hepatic vein. It was growing in the portal triad.

Dr. Mason: I can't refute that. The additional experimental evidence is that after ligation of the hepatic veins has caused ascites, an equal obstruction in the portal vein will then cause the ascites to go away. This is part of the evidence that the obstruction must be greater on the hepatic-vein side when ascites occurs.

Dr. Sheets: I think this case illustrates one of Dr. Bean's anecdotes, in which the "punch line" is that the best diagnosis may not be the correct one.

SUMMARY OF NECROPSY FINDINGS

1. Poorly differentiated carcinoma, probably primary in gallbladder, with
 - A. spread to extrahepatic bile ducts
 - B. metastases to liver (extensive) and to abdominal lymph nodes, peritoneum, adrenal gland and lung (microscopic)
 - C. jaundice
 - D. ascites (4,000 cc.)
 - E. splenomegaly
2. Acute pancreatitis
3. Focal calcification, myocardium
4. Adenoma, adrenal gland.

DR. MASON'S DIAGNOSES

1. Cirrhosis of the liver
2. Hepatoma.

STUDENTS' DIAGNOSES

1. Laennec's cirrhosis
2. Hepatic coma.

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President's Page



The other day, I read again an article which appeared last spring in a widely circulated popular magazine. It began: "The state of our nation's health is bad." Asserting that medical care in the United States ranks far below that of less affluent countries, the author flatly stated: "Only by one measurement does the United States excel all others—cost of illness."

Those having real knowledge of the quality of American medical care realize that such assertions distort the facts to the extent of absurdity. But does the public know this?

We need to find a way to tell our story to the people.

American medicine needs a spokesman!

On June 17, 1967, Paul Harvey in speaking at the annual Conference of Presidents and Other Officers of State Medical Associations laid it on the line when he said: "For most of two decades the doctor has been losing his voice." "Big Steel has a spokesman; so do the steel workers." "Someone representing medical interests must answer headlined indictments with equal boldness."

In a spirit of high regard for the medical profession, Mr. Harvey urged "that the American Medical Association again figure out some way effectively to speak through some *one* with *one* voice."

Many long months later, it is disturbing to me that no evident heed has been given Mr. Harvey's warning.

As I leave office, I shall recommend adoption by our House of Delegates of a resolution urging the American Medical Association to take immediate action to find a means of speaking out effectively with promptitude.

Thank you for the wonderful opportunity you have afforded me to serve you first as Secretary and then as President of a great medical society.

R. F. Birge

President



Editorials

UNIVERSITY ISSUE

The JOURNAL is again proud to present the University of Iowa College of Medicine issue, containing scientific articles of unusual merit.

We are perhaps too inclined to lose sight of the role of the College of Medicine in the continuing education of physicians, and of the part it plays in maintaining the high standard of medicine that is practiced in the state. The scientific articles that its faculty members contribute to the JOURNAL are invaluable, and we are deeply indebted to them for their efforts and for their cooperation.

A colleague recently told of his reaction to a three-day postgraduate course at the College of Medicine in these words:

"It was the best and most informative medical meeting I have ever attended." Physicians who do not take advantage of the programs offered at the University are missing an unusual opportunity to keep abreast of the rapid changes in medicine.

The public and the profession are justifiably proud of the University and of its College of Medicine. The staff of the JOURNAL express their gratitude to Dean Hardin and his colleagues for their support, and especially to those who have contributed so generously.

LET'S BE EVEN-TEMPERED, BUT PLEASANTLY SO

In the April, 1967, issue of PENNSYLVANIA MEDICINE, an editorial by Dr. Carl B. Lechner asserts that doctors are grouchier than they used to be. "More doctors are grouchy," he says, "and all doctors are grouchier, and they are grouchy for longer periods of time."

He ascribes their grouchiness to the fact that practically all doctors see very large numbers of patients and are subjected to too much pressure. Because of his electronic, mechanical and human help, the doctor today no longer has the comfort and the escape that once were provided him by routine duties and procedures. He now is under the constant torment of having to make serious value judgments. There is no recovery time between patients. He does not even have time to weigh problems between house calls any more. So, according to Dr. Lechner, "nearly all doctors have become much too irritable and grim and sullen and difficult."

Please, doctor, look into the mirror each morning and resolve, "I will not be irritable and grim and sullen and difficult!" A pleasant and cheerful and confident manner is one of the most effective implements in a physician's therapeutic armamentarium.

TRYPTOPHAN IN THE TREATMENT OF DEPRESSION

An increasing amount of research reported in the medical literature offers great hope for an elucidation of a metabolic basis for mental illness and for some of the chronic disabling neurologic diseases. The efficacy of modern drug therapy in the treatment of mental illness also appears to give support to the concept of a metabolic pathogenesis for those diseases.

A recent report by a British neuropsychiatric research unit on the use of the amino acid tryptophan in the treatment of depression is of unusual interest, and is perhaps another link in the research which will lift the veil of mystery that surrounds mental illness.*

In 1963 the authors reported that the addition of tryptophan to drug therapy consisting of an antidepressant and a monoamine oxidase inhibitor was more effective in the treatment of depression than were the latter alone. Since that time the British group have compared electroconvulsive therapy vs. tryptophan with or without a monoamine oxidase inhibitor. Some patients were also given rather large doses of potassium and a carbohydrate supplement predicated on the theory that it might increase the transport and metabolism of tryptophan.

The trial of tryptophan therapy was carried out at two medical centers. The treatment period was 28 days. All patients were evaluated on the basis of a self-rating inventory which, in the experience of the authors, agrees very well with a psychiatrist's evaluation of the patient. During the study period 41 suitable consecutive patients admitted to the hospital were assigned to the tryptophan therapy group. According to the authors they were patients who normally would have been given electroconvulsive therapy. Selection of patients was made on the basis of histories of severe, unrelenting depression, usually accompanied by alterations of mood, feelings of unworthiness and guilt, insomnia, apathy and suicidal thoughts. Patients with physical illness were excluded from the study. The group of 41 tryptophan-treated patients were then compared with 36 patients who had been admitted previously and had been treated by electroconvulsive procedures twice each week.

The tryptophan therapy consisted of 5 to 7 Gm. of tryptophan in one dose each morning for 28 days. In addition, each patient was given 100 mg. of pyridoxine hydrochloride daily. Nineteen of the 41 tryptophan patients were also given a monoamine oxidase inhibitor daily. Potassium and a carbohydrate supplement were administered to the 22 patients not given the antidepressant, and to nine of those who were receiving the monoamine oxidase inhibitor.

On admission, each patient completed an inventory designed to measure depression, and he repeated the inventory twice weekly during his stay in the hospital. On admission and before discharge, each patient completed a personality inventory. Patients were also classified as having either endogenous or reactive depression.

In reporting the results of the study, the authors stated that the average scores on the personality inventories in the three treatment groups did not differ significantly. That was true of those done on admission and of those done upon discharge from the hospital. It was also true regardless of whether the patients were classified as having endogenous or reactive depression.

In their comparison of the results of therapy, tryptophan appeared to be just as effective as electroconvulsive treatment in cases of depressive illness. There was no significant statistical difference in the scores of the three groups at any time during the study. The depression scores after 28 days varied little between patients treated with tryptophan and those given electroconvulsive therapy. The numbers in the various groups requiring more treatment before discharge constituted another indication of the efficacy of the treatments. Of the patients treated by electroconvulsive means, 22 per cent required additional treatment, compared with just 16 per cent of those who had been given tryptophan.

Despite the absence of any significant differences between those receiving tryptophan and

* Coppen, A., Shaw, D. M., Herzberg, B., and Muggs, R.: Tryptophan in treatment of depression. LANCET, 2:1178-1180, (Dec. 2) 1967.

those subjected to electroshock, two interesting trends were noted. Patients who were given both tryptophan and a monoamine oxidase inhibitor showed more improvement than those treated with tryptophan alone, but patients treated with tryptophan and the antidepressive drug plus potassium and carbohydrate supplements showed the greatest improvement of all.

The authors acknowledge that a therapeutic trial of this kind has limitations, for the study was not a blind one. However, since patient self-inventory was used, the factor of observer bias was eliminated. The absence of a control group perhaps detracts from the reliability of the results, but the authors point out that electroconvulsive therapy is a well-established, effective treatment for depression, and that treatment could not ethically have been withheld.

According to the British group the results in this study are of considerable theoretical interest. Their previous studies suggested that there is an abnormal indolamine metabolism in depression, and the present finding that tryptophan has antidepressant qualities lends support to the hypothesis that disturbances in indolamine metabolism may play an important part in depression. The observation that administering a monoamine oxidase inhibitor enhances the therapeutic effect of tryptophan also supports the concept that tryptophan exerts its effect by influencing indolamine metabolism.

Although the results reported in this interesting study may not revolutionize therapy for depression, it is by imaginative inquiry and zealous pursuit of new therapeutic concepts that progress is made in the treatment of disease.

BELL'S PALSY

A group of physicians from the General Infirmary at Leeds, England, under the leadership of Dr. D. Tavener, have been concerned with the problem of Bell's palsy for many years, and they have reported their observations in the British medical literature on numerous occasions. Their most recent article summarizes their results with a method which, they assert, provides a prompt and accurate prognosis in the individual patient.* On the basis of the outcome of the prognostic test, patients were allocated to treatment or observation groups. The treated patients were given daily injections of ACTH gel, and on the basis of results in patients treated promptly after the onset of the palsy, the physicians assert that the overall incidence of denervation was reduced by two-thirds, and of severe denervation with permanent disfigurement, by 90 per cent.

In 1965 Peiris and Miles, of the Leeds group, pointed out that between 35 and 45 per cent of patients affected by Bell's palsy show evidence of denervation, which may result in troublesome sequelae.† The correct management depends on the early detection of denervation, and this can be done by electrical conduction studies that permit a "firm prognosis" if they are carried out within seven days from the onset of the lesion.

The method employed by the Leeds physicians consisted of a measurement of the threshold for anodal galvanic stimulation of the tongue. This involved the use of a 120-volt battery connected through a circuit in which the cathode was held by the patient and the anode was applied to his tongue. The stimulus was applied to the lateral aspect of the tongue, first on the normal side. The strength of the stimulus was gradually increased until the patient was able to detect a distinct acidic taste. The same procedure was then repeated on the affected side, and the disparity of the threshold levels on the two sides was recorded. In addition to the anodal galvanic stimulation tests, electromyography and facial-nerve conduction were done in each patient.

In 1966 the same group asserted: "Our present policy is to treat all patients with Bell's palsy in whom there is any doubt about the likelihood of complete recovery because of a

* Tavener, D., Kemble, F., and Cohen, S. B.: Prognosis and treatment of idiopathic facial (Bell's) palsy. BRITISH M. J., 4:581-582, (Dec. 9) 1967.

† Peiris, O. A., and Miles, D. W.: Galvanic stimulation of tongue as prognostic index of Bell's palsy. BRITISH M. J., 2: 1162-1163, (Nov. 13) 1965.

raised threshold to anodal galvanic stimulation of the tongue."‡

According to Tavener and his colleagues, anodal galvanic stimulation tests the integrity of the chorda tympani nerve, which leaves the facial nerve at a variable point along its descending course. From their results, they believe that complete recovery is likely when the lesion causing the paralysis is situated distally, for swelling of nerve bundles is contained by perineurium rather than by the bony walls of the fallopian canal. It is in the mid-portion of the seventh nerve, where it is a single compact bundle of fibers, surrounded by a dense perineurium fusing with bony walls, that the nerve is particularly liable to damage secondary to swelling. This would explain the high liability to denervation when the chorda tympani is involved, and constitutes the basis for anodal galvanic stimulation of the tongue as a means of assessing the chances of recovery in patients with Bell's palsy.

The study group reported by the Leeds physicians totaled 381, and it consisted of 191 females having a mean age of 42.4 years, and 190 males with a mean age of 40.1 years. They were consecutive patients with idiopathic facial palsy of not more than five days' duration.

A final clinical evaluation of patients was made at least three months after the onset of paralysis, and patients with denervation were followed until no further improvement could be observed. The clinical assessment of recovery in the facial muscles was made in terms of a percentage of the normal function of the muscles on the unaffected side. The results were recorded as either "complete recovery" or "denervation."

In 165 patients the response to the anodal galvanic threshold test was normal, and they were left untreated. Of this group, 153 (93 per cent) recovered completely (as predicted), and 12 underwent denervation, though in only two of them was it serious. In 10 of the patients with denervation recovery of function was 70 per cent complete, and those people were satisfied with the outcome and considered themselves cured. Six of those 10 regained 90 per cent of normal function.

‡ Tavener, D., Fearnley, M. E., Kemble, F., Miles, D. W., and Peiris, O. A.: Prevention of denervation in Bell's Palsy. BRITISH M. J., 1:391-393 (Feb. 12) 1966.

A total of 216 patients were treated by intramuscular injections of ACTH gel—five daily injections of 80 units, and then 60, 40, 20 and 10 units on successive days. Of the 216 treated patients, 178 (82.5 per cent) recovered completely. Thirty-eight treated patients developed denervation, and of them only 11 were affected to a severe or moderate degree. Twenty-seven were only slightly affected, and in 14 of them recovery was 90 per cent of normal.

The authors point out that the results of prognostic testing and ACTH therapy should be contrasted with the results of controlled therapeutic trials which they carried out over many years prior to the introduction of these technics. In their experience the proportion of unselected patients with idiopathic facial palsy developing denervation was very close to 40 per cent. In 1959 Tavener reported 164 successive patients with denervation in whom 38 per cent had had recoveries of less than 30 per cent of normal; 23 per cent had had recoveries of between 30 and 70 per cent of normal; and only 39 per cent had had recoveries of over 70 per cent of normal.

In the summation of their present study, the authors point out that of 381 patients, 50 (13 per cent) developed denervation, in contrast to the 150 (40 per cent) that might have been expected to do so. They also say that the degree of denervation was much smaller than might have been expected. The share of patients with severe denervation and less than 30 per cent subsequent return of function has fallen from 15 to 1.8 per cent!

In conclusion, they assert: "Measurement of the threshold for anodal galvanic stimulation established the prognosis for recoverable conduction block with an accuracy of over 90 per cent.

"The results of treatment with ACTH gel intramuscularly in 381 patients show a reduction in the overall incidence of denervation by two-thirds, and of severe denervation by 90 per cent."

They also state that further improvement in the results is to be expected if treatment is begun on the first day of the palsy, and that it would be justifiable to treat all cases of severe facial palsy with ACTH gel if facilities for

anodal galvanic testing were not immediately available.

If ACTH therapy for Bell's palsy is as effective as the British group have reported, and if the technique of anodal galvanic stimulation of the tongue is a reliable test of the prognosis, then it would appear worthwhile for the test to be performed in the electromyographic departments of our hospitals. The ability promptly to detect the presence of denervation in the 35 to 45 per cent of patients in whom it is reported to occur, and then prompt treatment with ACTH might avert the permanent disfigurement that can result from severe denervation.

ENVIRONMENTAL FACTORS IN THE INCIDENCE OF CARDIOVASCULAR DISEASE

The report of a survey of cardiovascular findings in a group of some 600 American men and in a similar group of Englishmen with the same ages and occupations has recently been made by three British epidemiologists, Reid, Holland and Rose.* The two studies employed identical clinical methods and diagnostic standards, and the objective was to determine whether national environments and ways of life have etiologic significance in cardiovascular disease.

The subjects of study in Britain were 676 men between the ages of 40 and 59 employed either as postmen or Post Office engineers in London and three other British cities. The study group in this country consisted of 625 men engaged in similar work in Westchester, Washington and Baltimore. In both the British and the American studies, each member was required to complete a questionnaire concerning pain in the chest or legs which might be compatible with angina, possible myocardial infarction or intermittent claudication. A 12-lead electrocardiogram was taken on each member, and recordings of blood pressure were made. The height, weight and skinfold thickness were also measured and recorded. Smoking histories were obtained by means of a standard questionnaire.

The authors assert that by equating diagnostic methods and standards, and applying them to those comparable groups, they hoped to determine whether there was any international difference in cardiovascular morbidity that was consistent with the difference in cardiovascular mortality between the two countries. Previous studies had revealed that the mortality from coronary heart disease was half again as high in the United States as it was in England and Wales. If a difference in morbidity could be demonstrated, it would be possible to assess differences in personal characteristics such as physique or smoking habits. Disparities which could not be satisfactorily explained would then be attributed to differences in national environments or ways of life.

Interrogation revealed that in the English and the American groups the incidences of pain compatible with angina were almost identical in the age group 40-49. However in the 50-59 age group there was an incidence of 7.9 per cent for the Americans compared to an incidence of 4.7 per cent in the English study group. In both age groups the pain possibly due to infarction was higher in the American men than in the English—5.6 and 2.4 per cent, respectively, in the 40-49 age group, and 9.6 and 2.4 per cent in the 50-59 age group. Surprisingly, the incidence of pain suggesting intermittent claudication was negligible in the study group in this country, whereas the English survey revealed an incidence of over 2 per cent in men of both age groups.

Comparison of the electrocardiographic findings showed evidence of *probable* ischemia in 3.5 per cent of the men in the 40-49 age group in this country compared to 1.1 per cent in the Englishmen of the same age. However in the older age group, 50-59, the rates increased to 7.9 and 2.7 per cent, respectively. The incidence of findings compatible with *possible* ischemia were 8.1 per cent and 4.2 per cent, respectively, in the younger age group, and 13.5 per cent and 9.2 per cent, respectively, in men between 50

* Reid, D. D., Holland, W. W., and Rose, G. A.: Anglo-American cardiovascular comparison. LANCET, 2:1375-1378, (Dec. 30) 1967.

and 59 years of age. Thus there was demonstrated a significant excess of both *probable* and *possible* ischemia in the American group according to electrocardiographic studies.

There were only small differences in blood-pressure findings in the two groups. Below the age of 50, the mean systolic pressure was found to be somewhat higher in the Britons, but after the age of 50 it was significantly higher among the Americans. The diastolic pressures, though showing no significant differences, for the most part followed the patterns of the systolic levels.

The summary of information concerning personal data (on both habits and physique) seemed to cast some light on the Americans' higher risk of cardiovascular disease. The American men averaged 1.6 inches taller and weighed 20 pounds more than their English counterparts. Measurement of skinfold thickness over the triceps and in the subscapular area was also significantly greater in the American men than in the British. There was some difference between the smoking habits of the two groups. A larger percentage of the Americans were non-smokers—14.2 compared with 6.7 per cent. However 40 per cent of the Americans smoked over 25 cigarettes per day, whereas only slightly more than 10 per cent of the British group smoked to that extent.

In both the American and British groups, blood pressures—particularly diastolic pressures—were closely related to body weight and to adiposity as demonstrated by the skinfold thickness. In both groups, smokers were inclined to have lower pressures, especially diastolic. However those differences were ascribed to lower body weights among the heavy smokers. When blood pressures are adjusted for differences in weight, there is little difference in the levels between the smoking groups in the two countries. This finding indicates that the moderate elevation of blood pressure in the American men can be ascribed to their excess in weight, rather than to a difference in their smoking habits.

In neither country could any consistent correlation be shown between smoking habits and the frequency of symptoms consistent with cardiovascular disease or with electrocardiographic signs of ischemia, although in each smoking group based on the number of cigarettes smoked daily, the correlation was uniformly higher in the U. S. group. However the differences in smoking habits were considered insufficient to constitute a reason for the Americans' greater incidence of cardiac disease.

The authors point out that if the American excess in cardiovascular morbidity is accepted, the possible causes should be found in the greater body weight and the greater obesity indicated by skinfold thickness. Though there was a higher percentage of heavy smokers among the American men, the difference was not considered remarkable. The interrelation between obesity and blood pressure, as shown in this and other surveys, is significant, and differences in blood pressure are of decisive importance as a basis for predicting cardiovascular disease.

The authors conclude with the statement: "The American excess in ischemic heart disease is most likely to be related to the adiposity of the American middle-aged male. Whether this fatness reflects national differences in diet or in exercise habit is as yet unclear." They also assert that because of inherent limitations of prevalence surveys, the role of adiposity in the American excess in cardiovascular mortality may be best assessed by long-term follow-up inquiries in national samples.

OSTEOMYELITIS

For one who served in a large children's surgical ward back in the early twenties, the young patients afflicted with acute osteomyelitis are unforgettable. I recall so vividly the pained expressions, the extreme toxemias, the wide-open wounds following a gutter operation, the high morbidity and mortality, and the long periods of invalidism. The inevitability of "once osteomyelitis, always osteomyelitis" was dramatically impressed on everyone who cared for those children.

The effectiveness of a hitherto quite un-

heralded antibiotic in treating that disease at the Royal Liverpool Children's Hospital is an outstanding example of the miracles which modern medicine has wrought. Green, a Liverpool orthopedist,* points out that in this era of antibiotic-resistant bacteria, the antibiotic to be administered first to a patient with acute osteomyelitis is usually chosen by guesswork. If the guesswork could be eliminated and if the initial therapeutic were an antibiotic to which all commonly encountered pathogens were sensitive, there would be no necessity for changing to another agent after the results of sensitivity tests became available. Furthermore, a major step would have been taken toward preventing the disease from progressing from the acute to the chronic phase.

According to Green, an antibiotic for the treatment of acute osteomyelitis should possess certain qualities: (1) It should be effective against most organisms encountered in this disease. In a review of over 700 cases of acute osteomyelitis from hospital records and reports in the literature, 87 per cent were found to have been due to staphylococci; 6.5 per cent were streptococcal in origin; and 6.5 per cent were caused by a wide variety of other organisms. (2) In order to avoid multiple daily injections in children, an oral antibiotic is necessary. (3) The drug should be bactericidal as well as bacteriostatic. (4) There should be no adverse side effects, even with prolonged therapy. (5) Despite prolonged use, it should not lead to the development of resistant strains.

In the orthopedic wards of the Royal Liverpool Children's Hospital, a clinical trial of the antibiotic cloxacillin (Orbenin) was carried out during the years 1964 and 1965 to determine whether it satisfied the criteria enumerated above, and whether it would prevent the progression of the disease from the acute to the chronic phase.

During the two-year trial period 62 patients with acute osteomyelitis were treated. The diagnosis was made on the classical findings of the disease. Conformation of the diagnosis was established in certain cases by changes observed in comparison of x-rays taken on admission and after an interval of four weeks. Blood cultures were helpful in some cases.

A method of treatment was chosen on the basis of the duration of the disease prior to the patient's admission to the hospital, the severity of the local signs, the degree of fever and the severity of toxemia. Conservative treatment consisted of administering cloxacillin. Surgical treatment was also employed if it was thought that pus was present, and the surgery consisted of immediate bone-drilling. All patients were given an intramuscular injection of cloxacillin on admission, irrespective of the method of treatment to be employed. The antibiotic was then given orally to both groups at six-hour intervals for a period of five weeks, the dosage being based on the age of the patient rather than on his weight.

During the period of study, which was just under two years, 62 patients with acute osteomyelitis were treated. Twenty-seven of them were successfully treated by cloxacillin alone, and 35 were treated by bone-drilling in addition to cloxacillin therapy. There were no deaths. "Absolute failure" of treatment was defined as progression of the disease to the chronic phase; "relative failure" was defined as recurrence of the disease, and it included those patients in whom the removal of a sequestrum was necessary. Among the 27 patients treated conservatively, therapy was started within 48 hours following the onset of symptoms, and in only one patient was there a recurrence. It occurred six months later and it responded to a second course of cloxacillin. In the operative group of 35 patients there were two who developed sequestra during the first five weeks of therapy, and three others had a recurrence of infection within six months. Thirty of the group made uneventful recoveries. Thus, in the conservative-therapy group there was a relative failure rate of 3.7 per cent. In the operative group there was a relative failure rate of 11.4 per cent, and an absolute failure rate of 2.8 per cent. All but one of these patients were admitted more than 48 hours after the onset of symptoms.

In 32 of the 35 patients in whom bone-drilling was done, pus was obtained and a positive culture resulted. In all but one the organism was

* Green, J. H.: Cloxacillin in treatment of acute osteomyelitis. BRITISH M. J., 2:414-416, (May 13) 1967.

Staphylococcus aureus; in the one exception a beta hemolytic streptococcus was isolated. The only antibiotic to which all the staphylococci isolated were sensitive was cloxacillin. In 55 per cent, the organism was resistant to penicillin; in 22 per cent it was resistant to both streptomycin and chlortetracycline; in 13 per cent it was resistant to both erythromycin and tetracycline; and in 13 per cent it was resistant to chloramphenicol.

The overall results in the 62 patients consisted of uneventful recovery in 56; a single flare-up in three; sequestrectomy in two; and progression to a chronic phase in just one. The overall relative-failure rate was 8 per cent, and the absolute failure rate was 1.6 per cent.

Green emphasizes that one of the most serious problems has been the emergence of antibiotic-resistant staphylococci during the past 15 years. It has put the physician in a quandry over the antibiotic that he should use before the results of sensitivity tests become available. In this series of cases, none of the staphylococci cultured was cloxacillin-resistant, but resistance was encountered to all other commonly used antibiotics. Another point deserving stress was the importance of early treatment—preferably within 48 hours following the onset of symptoms.

The complete resolution of infection in 90 per cent of patients is a truly remarkable statistic!

Letters to the Editor

Sir:

I hope the members of the IMS will take a forward view at this year's annual meeting in regards to the liberation of our state law concerning the termination of a pregnancy.

Let's leave the decision when to terminate such to the physician and patient. The clergy and their followers should stay with the spiritual, and let the physician and patient decide on the physical aspects of a pregnancy. The physician does not tell the clergy what they should or should not preach.

As many of our state laws are today, they force a women [sic] who is determined to end a pregnancy to go to a criminal abortionist, and cause the death of an estimated 5 to 10 thousand yearly in the U. S. Thus, the state could be looked upon as murdering these women, which means you and me.

How can the fetus have a soul as some contend, when science indicates the functions of the fetus can all be performed by the brain stem alone? Albrecht in Cerebral Functions in Infancy and Childhood, stated that he, "saw that neither the fetus or the infant being born, nor the infant being recently born, shows any recognizable signs of consciousness—that the acts of the new born infant can be handled by his brain stem, because these acts can be observed in a new born anencephalic monster, who has no cerebral hemisphere or cortex." And Frederick Gibbs, M.D., states that a "new born infant—has about as much of an EEC as has a wet sponge." And Bishop Pike stated, that "authorities such as St. Thomas Aquinas and Pope Innocent III and Gregory XIV did not regard the fetus as being a person before the time of quickening."

I hope that physicians will take a realistic view of the status of the fetus, and weigh it against the unnecessary death of many women, who will go to a criminal abortionist, regardless of the risk, to terminate a pregnancy. We should be the first ones rather than the last ones to ask the state to get out of the abortion field.

PETER VAN ZANTE, M.D.

Pella, Iowa
March 14, 1968

Coming Meetings

(Continued from page 343)

May 19-20	**First International Symposium on Dextrans,** Flagship Hotel, Galveston Island, Texas.
May 19-22	**Illinois State Medical Society,** Sherman House, Chicago.
May 20-24	**Prevention and Early Detection of Disease in Clinical Practice, University of Pennsylvania School of Medicine,** Philadelphia.
May 24-25	**Surgery and Thirteenth Annual Trauma Day, University of Nebraska College of Medicine,** Omaha.
May 27-30	**Auscultation of the Heart, Hahnemann Medical College and Hospital,** Sheraton Hotel, Philadelphia.

ABROAD

Apr. 21-27	**Inter-American Congress of Cardiology (8th),** Lima, Peru.
Apr. 28-May 4	**Inter-American Congress of Atherosclerosis (3rd),** Buenos Aires.
June 30-July 6	**Third International Seminar and Exhibition —Theme "World Problems in Rehabilitation of the Disabled,"** Hotel Metropole Conference Centre, Brighton, England.

At the IMS Annual Meeting

Plan to attend the

President's Reception and Annual Banquet

Tuesday, April 30

Hotel Fort Des Moines

University Hospitals DRUG LETTER

DILANTIN®

W. E. BELL, M.D.

Diphenylhydantoin (Dilantin®) has been a valuable therapeutic agent for certain types of convulsive disorders since its introduction into clinical medicine in 1938.[1] Although considerable information continues to accumulate concerning the metabolism and toxicity of the drug, the mechanism of its anticonvulsant effect at the cellular level remains somewhat unclear. At least in part, diphenylhydantoin raises the seizure threshold by enhancing sodium extrusion from the cell across the cell membrane, thus producing an increased extracellular to intracellular sodium ratio.[2] Other potential anticonvulsant mechanisms of diphenylhydantoin, including its effect on the adrenal cortex or the inhibition of the release of cerebral excitatory transmitter substances, remain unestablished. The stabilizing effect of diphenylhydantoin on neuronal hyperexcitability is believed to be most effective on normal nerve cells, rather than at the primary site of the seizure discharge. Thus its anticonvulsant effect may result more from the prevention of a spread and generalization of the electrical discharge to other areas than from a primary suppression of the abnormal focus itself. Nevertheless, in an experimental situation it has been shown that diphenylhydantoin is relatively ineffective in preventing the development of an electroencephalographic mirror focus, as compared with phenobarbital.[3]

Of the many undesirable consequences of diphenylhydantoin therapy, those due to Purkinje-cell involvement are the most widely known. Nystagmus, dysarthria and ataxia are the usual clinical correlates of drug-induced cerebellar dysfunction. Other side-effects of diphenylhydantoin include skin rash, gastrointestinal symptoms, hirsutism, abducens palsy, bone-marrow depression, megaloblastic anemia, hepatic necrosis and reticuloendothelial hyperplasia. Other less distressing metabolic effects ascribed to diphenylhydantoin include a rise in serum ceruloplasmin and a decline in the serum protein-bound iodine.[4] Other tests of thyroid function remain unaffected, and the patient remains euthyroid. The reduction of the serum PBI in persons taking diphenylhydantoin is an extrathyroid effect resulting from competitive displacement of thyroxin from its protein-binding site.

An important event in the metabolism of diphenylhydantoin is its parahydroxylation which occurs in the liver. Normally, 60-70 per cent of the daily diphenylhydantoin intake is excreted in the urine as 5-phenyl-5-parahydroxy-phenylhydantoin. About 30 per cent is excreted as less well-identified substances, and less than 5 per cent is excreted unchanged.[5] The development of methods for determining diphenylhydantoin blood levels[6] and of the main urinary excretory product[7] has established expected levels at various dosages. Thus, expected diphenylhydantoin blood levels in normal adults have been found to be 3-15 μg./ml. with 300 mg. per day; 10-25 μg./ml. with 400 mg. per day; and over 20 μg./ml. with 500 mg. of diphenylhydantoin per day.[8]

The determination of blood levels of diphenylhydantoin has resulted in a better understanding of the variations in the effectiveness of the drug and the relative intolerance to it that some individuals exhibit. Some persons have been found to develop signs of diphenylhydantoin toxicity even though the dose administered was relatively low per unit of body weight. Kutt *et al.* [9] studied a patient without evidence of liver disease who became toxic while taking 300 mg. of diphenylhydantoin per day, or 3.8 mg. per kilogram per day. On that dosage the blood level of diphenylhydantoin was found to rise as high as 87 μg./ml.—a level far in excess of the anticipated 3-15 μg./ml. seen in most persons taking an equivalent amount. In this person the amount of diphenylhydantoin needed to produce therapeutically effective blood levels was approximately one-third that required in most individuals. The authors also studied other family members and found that the patient's mother and one sibling demonstrated a similarly limited ability to metabolize diphenylhydantoin. They concluded that the most likely explanation for those findings was a genetically determined disturbance of parahydroxylation of diphenylhydantoin in the liver, the consequences of which were unusually high blood levels of the unmetabolized drug.

Dr. Bell is an associate professor of both neurology and pediatrics. This article appeared initially in the January, 1968, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. Materials from DRUG LETTER are reprinted here at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors.

Other investigations have suggested that defects of diphenylhydantoin parahydroxylation may occur if certain other drugs are taken simultaneously. A combination of isonicotinic acid hydrazide (INH) and paraminosalicylic acid (PAS) may interfere with the metabolism of diphenylhydantoin in some patients, and produce markedly elevated blood levels and potential diphenylhydantoin intoxication.[10] Disulfiram (Antabuse®) also has been shown to elevate blood-diphenylhydantoin levels, presumably by interfering with its metabolic degradation.[11]

The investigators who performed the studies described above noted that certain persons taking diphenylhydantoin seemed to show no signs of toxicity and little anti-convulsant effect, even while on high doses of the drug. The combination of a high oral dosage, a low blood level and a high urine output of the metabolic product (5-phenyl-5-parahydroxy-phenylhydantoin) has been interpreted as evidence of unusually rapid metabolic degradation of the drug in the liver. Such persons may represent the opposite end of the spectrum from those with relatively poor parahydroxylating ability. Phenobarbital has been shown to enhance the speed of diphenylhydantoin metabolism in animals, with a subsequent lowering of the diphenylhydantoin blood level.[12] In human beings, however, Kutt *et al.*[13] showed that the effect of chronically administered phenobarbital on diphenylhydantoin blood levels was variable and unpredictable from patient to patient. Gastrointestinal malabsorption of diphenylhydantoin might also account for ineffectiveness of the drug despite the oral administration of a high dosage.[8] The identification of a low blood level and a low level of the excretory product in the urine following a documented oral intake of the drug would be indicative of this type of disturbance.

Although the variations in diphenylhydantoin metabolism discussed above may not be common, the data do indicate that in certain instances determination of blood levels may be a very helpful guide to therapy. It is also apparent that other medicinal agents administered with diphenylhydantoin may influence its metabolic rate, perhaps either enhancing the possibility of intoxication, or reducing the clinical effectiveness of the drug at a given dose level.

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April Short Courses in Omaha

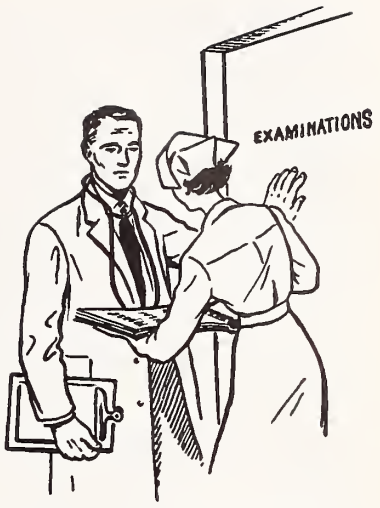
Two courses are on the April calendar of the continuing education department of the University of Nebraska College of Medicine.

A course stressing psychiatric skills needed in the office of a general practitioner will be offered April 8 and 9. Particular emphasis will be given to problems of adolescents and to interviewing methods. University of Nebraska College of Medicine faculty members will serve as speakers. Dr. William F. Roth, Jr., professor of neurology and psychiatry, is coordinator of the course.

Last year's popular course on coronary care units will be repeated April 18 and 19. The course will be directed to nurses and administrators as well as doctors. It will feature design, organization, operation and financing of a coronary care unit as well as training of personnel. An outstanding guest faculty will supplement speakers from the University of Nebraska College of Medicine. Dr. Robert Stratbucker, associate professor of physiology and internal medicine, is coordinator of the course.

Both courses will be conducted in the Eppley Cancer Institute, 42nd and Dewey Streets, Omaha. Both courses carry twelve hours of AAGP credit in Category I. The registration fee for each course is $40 and includes two luncheons.

THE DOCTOR'S BUSINESS



Time for a Financial Checkup?

LARRY E. LEAVERTON
Des Moines

At this time of year, when income tax returns are filed, the common question we hear is "Where did it go?"

In answering this question, if you do not have a complete accounting of your finances, your tax return is a good place to start. It will show you your adjusted gross income (gross receipts from your practice less business expenses, plus non-professional income such as interest, dividends, or any other such items). From the adjusted gross income, the first big items to subtract are federal, state and local taxes. Then comes interest on your mortgage and notes. The remainder represents your spendable income for personal living expenses, charities, life insurance program, and investments designed to yield current income, and to provide for your retirement. If you are making fixed payments on mortgages and notes, the principals must also come out of these amounts.

How your "spendable income" is apportioned can be controlled, but your taxes cannot. As your income increases, your income tax increases in greater proportion. Some doctors think when they are told they are in, say, a 36 per cent federal tax bracket that they are paying 36 per cent of their income in federal tax. That is not true, for the tax is scaled upward in brackets from 15 all the way up to the 36 per cent. For instance a married taxpayer with a net taxable income of $25,000 after personal exemptions, pays about $6,000 in Federal tax—about 24 per cent. It is just his *top* $1,000 that is taxed at 36 per cent.

The financial problems a doctor faces start during the period of his education. Unless he receives gifts from relatives, he must borrow money. When he starts practice he must purchase furniture and equipment. If he joins an established medical group, he is expected to make an investment in it. He is establishing and furnishing his first permanent home. His family, having been denied many items common to other families during his period of internship and residency, is eager to use whatever credit is available to purchase furniture, appliances and automobiles. The result is frequently over-extension of credit and over-spending.

We have commented in previous articles about the doctor's obligation to attempt holding down the costs of medical care by means of efficiency in office operation. That efficiency must be carried into his personal finances too. Studies by our firm show that the average physician will spend about 44 per cent of his pre-tax net income for personal living expenses; 5-6 per cent for life insurance premiums; and 16-17 per cent for liquidation of his notes and mortgages, and his investments. We refer to this last item as net gain. If your personal living expenses exceed the average just stated, or if your net gain is less than 16 per cent, you should take corrective measures.

How expensive a house can be justified is difficult to determine. It must be remembered that a personal residence is a non-income-producing asset. Many people are sacrificing investment and retirement funds by having all of their assets tied up in a residence and furnishings. The expense of a residence does not end with the mortgage payment. Furnishings, property taxes, maintenance, and the entertaining done there must be considered. If you can save and invest substantial amounts over and above your personal living expenses and mortgage payments, you are within a safe range. If you cannot, you probably will encounter financial difficulty in the future.

It is important for you to set financial goals while you still have time. Whatever his income, a doctor cannot consider himself financially successful if he has no non-professional (investment) income to report on his tax return.

A good rule to follow is to stay away from outside investments that require a great deal of management time, unless you are willing to take that time and attention away from your medical practice and your family.

The doctor with a well-managed practice usually has his personal financial affairs in order.

He will have set financial goals.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.



What can be done for Susan Jane To stop the runs and crampy pain?

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin, and protects intestinal mucosa.

In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
Paregoric (equivalent).....(1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin (2½ grains) 162 mg.
Kaolin (specially purified)....(85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Children's Dose: One or two teaspoonfuls three times daily.

ROER

WILLIAM H. RORER, INC.
Fort Washington, Pa.

He has an adequate insurance program to protect himself and his family against the possibility of his untimely death or disability.

He has an up-to-date estate plan, designed by an experienced attorney, to protect his heirs against unnecessary shrinkage of his estate as a result of taxes and administrative costs.

He has provided educational funds, wisely invested, for his children.

He has a realistic plan for his retirement—and he is following this plan religiously.

If your net gain is not increasing in proper proportion to your income, a financial checkup may be in order to determine whether the patient is in good financial health.

Workmen's Compensation Symposium and Banquet

Sponsored by Workmen's Compensation Advisory Committee

Hotel Savery, Des Moines

Wednesday, May 1

1:30 p.m. "How to Improve Our Workmen's Compensation Laws"—Harry W. Dahl, Iowa industrial commissioner; Keith D. Skelton, lawyer, state representative and professor at the University of Oregon; T. W. Johnston, chairman, Florida Industrial Commission

"The Orthopedic Examination and What It Reveals"—W. M. Krigsten, M.D., Sioux City orthopedic surgeon

Thursday, May 2

9:00 a.m. "Recent Workmen's Compensation Decisions"—Richard McMahon, Davenport Attorney, Staff

"Claims and Trial Workshop"—Completing forms, benefit determination (300-Day Rule), the NEW Executive Coverage Statute

1:30 p.m. "The New Social Security—Workmen's Compensation Offset"—John V. Keaney, chairman, Maine Industrial Accident Commission

"Safety and Rehabilitation"—Chairman: J. Franklin Garner, director, Florida Workmen's Compensation Division; Mrs. Lakie Johnson, R.N., Florida rehabilitation nurse; Mrs. Marilyn Terrell, R.N., Iowa rehabilitation nurse

"Industrial Dermatoses"—C. E. Radcliffe, M.D., professor of dermatology, S.U.I. College of Medicine

"New Horizons in Workmen's Compensation"—Ralph E. Gintz, president, International Association of Industrial Accident Boards and Commissions

5:30 p.m. COCKTAIL HOUR

6:30 p.m. BANQUET—Speaker: Hon. Harold E. Hughes, governor of Iowa (tentative)

Registration fee of $15.00 per person includes "Refreshments" and Dinner.

Send reservations (including names of registrants) and checks made payable to "Workmen's Compensation Meeting," to: Workmen's Compensation Meeting, P.O. Box 712, Des Moines, Iowa 50303.

STATE DEPARTMENT OF HEALTH



ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Iowa's Home Care Services

THELMA LUTHER, R.N., M.P.H.

Finding ways of reaching rural populations and urban people with limited resources is a major challenge for those who want Iowa's sick and disabled to have better care and more rehabilitative services. Iowa is meeting the challenge by developing home health services under a variety of auspices.

First, let us explore the meaning of "home health care." "Home care" means any arrangement for providing needed health care and supportive services, under medical supervision, to the sick and disabled person who is at home. In addition to nursing, such services may include physical therapy, occupational therapy, speech therapy, medical social services, homemaker-home health aide services and others.

Home care services should be available to persons of all ages, and to the financially independent as well as the less affluent. Care should be available for all illnesses, and for postoperative, rehabilitative and convalescent care.

The home environment must, of course, be suitable for the care of the patient, and the family must be willing to shoulder its part in the patient's care. Also the patient must want to be at home.

Home care services should be viewed as part of a total medical care plan, not as a substitute for hospital, nursing home or other institutional care.

Depending on the needs of the patient, home care may require the assistance of many services and organizations, combining their efforts as a team directed by the physician, to provide the best possible care of the patient. Leadership by the physician is essential to the successful operation of home care services.

A good home care program can prevent or postpone disability. Physicians who have used such services feel that one of the greatest advantages of home care is the continuity of services. After leaving the hospital in fairly good condition patients receiving this care do not deteriorate into their prehospital status or worse.

It is believed that a good home care program expedites recovery from illness. Particularly in long-term illnesses, patients are much better satisfied at home, where they are with family and friends. The care given them is tailored to meet the needs of the individual patients. Having the patient at home promotes a feeling of security for the patient and family.

A good home care program helps in reducing the total cost of illness. Improvement in the utilization of existing hospital facilities is another effect of a good home care program. When utilized efficiently, a good home care program will lessen and postpone the need for additional hospital beds.

One of the conditions required for participation by a home care agency in the Health Insurance Benefits Program (Medicare) is that the original orders of a physician and all changes in orders for the administration of dangerous drugs and narcotics be signed by the physician and incorporated in the patient's record maintained by the agency. All other changes in orders are either signed by the physician, or by a registered professional nurse in the agency if such changes have been given her verbally.

Another condition for participation is that the plan of treatment be signed by the physician who is responsible for the care of the patient and incorporated in the record maintained by the agency for the patient. As necessary but at least every two months, the total plan is reviewed by the attending physician, in consultation with the agency's professional personnel. The plan of treatment includes medications and other forms of treatment, diet, activities permitted, and other services needed for the care of the patient.

From the treatment plan, other members of the team receive their guidelines for developing their own professional care plans. Nursing team members make what is called a nursing care plan. This is the nurse's guide to what the nursing team (public health nurse, registered professional nurse, practical nurse and aide) consider necessary nursing care for the patient. This plan includes frequency of nursing visits by team members, observations of the patient's physical, emotional, and social needs, and the types of nursing care which may meet these needs.

Regular reports on the patient are given to the physician by team members. Marked changes in the course of the patient's illness will be reported

to the physician immediately. Good communication is an essential part of an efficient home care program, be it by telephone, mail or personal contact. Regular team meetings are helpful. At them the physician, nurse, physical therapist, occupational therapist and others involved with the patient's care can discuss the patient's progress and plans for his care.

Eighteen visiting nurse associations in Iowa have been operating for a number of years in the larger urban areas. In 1965 they were giving home care services and some preventive services to approximately one-third of Iowa's total population. With the coming of the Health Insurance Benefits Program and the increasing demand for home health services, three of these agencies expanded to serve the entire area of the county in which each was located. Two expanded to include nearby small towns or areas immediately outside the city.

The number of professional nurses on these staffs increased, and practical nurses were added. They began providing at least one second service such as physical therapy, occupational therapy, speech therapy, homemaker-home health aide or medical social service, either by adding workers to their staffs or by contracting for service from other agencies. Seventeen of these agencies became certified for participation in the Insurance Benefits Program.

Five new agencies developed in rural areas. These also were certified under the Health Insurance Benefits Program, bringing the total to 22 certified agencies in Iowa.

Throughout the state, 31 homemaker-home health aide services also are in operation, serving forty-one counties. Approximately one-half of the state's people have access to these services.

Fifty-three counties in Iowa employ one or more county nurses, who serve all age groups and all financial brackets with preventive and educational services and give limited home care services. In the majority of counties each nurse serves a large population, and the home care she can give has for the most part had to be limited to demonstration of care to a family member and supervision of that care.

County nurses in Iowa were not permitted to charge fees for their services until permissive legislation was passed by the 1967 General Assembly. Now a number of county boards of health are making plans for establishing cost studies in preparation for setting fees for home health services. Fees will be on a sliding scale, and no patient will be denied care because of inability to pay.

County nurses serving a large population will not be able to offer unlimited home-health services. It is anticipated that as the demand for services increases and fees are charged for services rendered to those who can pay, county boards of health may then be able to employ more county nurses.

A number of home health agencies indicate that they have facilities to care for more patients than are being referred to them. Referrals may come from hospitals, nursing homes, welfare agencies, families, neighbors or the patients themselves, as well as from physicians.

Local medical societies are becoming more concerned about the availability and adequacy of health care facilities. Medical societies can stimulate interest in and acceptance of home care. A number of societies are providing community leadership toward increased use of existing home care services and the development of new services where needed.

Morbidity Report for Month of February, 1968

Diseases	1968 Feb.	1968 Jan.	1967 Feb.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	649	536	1259	For the state
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	14	23	79	Boone, Fayette, Linn, Scott, Webster
Whooping cough	8	10	5	Louisa, Polk
Brucellosis	0	1	0	
Chickenpox	882	792	1150	For the state
Meningococcal meningitis	3	1	1	Lee, Polk, Pottawattamie
Mumps	1983	1827	496	For the state
Poliomyelitis	0	0	0	
Infectious hepatitis	65	33	44	Black Hawk, Cerro Gordo, Lee, Plymouth
Rabies in animals	12	16	9	For the state
Malaria	2	0	2	Polk, Tama
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	11	10	21	Entire state
Syphilis	58	49	58	Entire state
Gonorrhea	262	271	257	Entire state
Histoplasmosis	1	4	11	Jackson
Food intoxication	0	0	0	
Meningitis (type unspec.)	0	5	6	
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	4	4	5	Johnson, Polk
Tetanus	0	0	0	
Chancroid	1	0	2	Polk
Encephalitis (type unspec.)	0	0	2	
H. influenzal meningitis	2	1	0	Jefferson, Polk
Amebiasis	0	4	2	
Shigellosis	4	8	4	Black Hawk, Linn, Polk
Influenza	2857	5412	0	For the state

New Manual—New Program From Iowa Heart Association

A new manual to assist hospitals in planning, organizing and implementing effective programs for administering emergency cardiopulmonary resuscitation, is now available from the Iowa Heart Association. The release of the new manual coincides with the current implementation by the Iowa Heart Association of its statewide Cardiopulmonary Resuscitation instructional program launched in February.

Implementation of the CPR emphasis program followed a statewide CPR conference held at the U. of I. College of Medicine.

The day-long CPR workshop was taught by a nationally recognized cardiopulmonary resuscitation authority, Dr. James Elam, professor of anesthesiology at the University of Chicago.

Entitled "Emergency Resuscitation Team Manual: A Hospital Plan," the 56-page booklet stresses that "it is the responsibility of every hospital, regardless of size, to have an effective program for emergency resuscitation," and that the planning for such a program deserves the highest priority.

That the prompt application of CPR measures can sustain life in victims of cardiac arrest has been well documented in experimental and clinical studies. It adds that such victims should have the benefit of an effective hospital program for survival.

The manual covers all phases of a hospital CPR program from the initial organization and duties of a CPR committee, to the aftercare of patients who have been resuscitated. Sections of the publication are devoted to training programs for hospital staff and ambulance personnel and for rescue squads who use the hospital's emergency services; communication (alert) systems for rapid mobilization of CPR personnel; and the movement of personnel and equipment in CPR emergencies.

The manual points out that the Iowa Heart Association will assist in organizing and scheduling training courses, and in providing the training materials needed for such workshop sessions.

Illustrations depict steps necessary for alerting the CPR team and describe modified commercial "crash" carts that have been proven satisfactory from the viewpoint of both utility and economy. The booklet also carries an itemized list of drugs and equipment for supplying crash carts and nursing stations.

Copies of the manual may be obtained by hospitals, medical schools, medical societies and other interested groups or individuals through the Iowa Heart Association.

Complications Following Smallpox Vaccination

During the calendar year 1968, the Iowa State Department of Health, in cooperation with the National Communicable Disease Center, will conduct a survey to determine the incidence of complications following smallpox vaccination. Although vaccinations for smallpox have been performed since before 1800, little is known concerning the frequency of resulting complications. Many authorities feel that the risks of morbidity and mortality of smallpox vaccinations in this country exceed the risk of contracting smallpox. Therefore, it is important to establish factual information on the complications following this common medical procedure. The results of this survey will be used in reevaluating the current recommendations concerning smallpox vaccination.

Throughout 1968 each physician will be surveyed at the end of each quarter. A standard check list of complications and a supply of self-addressed, stamped envelopes will be provided to simplify the doctor's reports. Specific epidemiologic data on cases of complications, such as birthdate, sex, date of vaccination, and history of previous vaccinations will be needed later.



Iowa Association of Medical Assistants

IAMA Annual Meeting

The Sioux City Medical Assistants offer "Horizons UNLIMITED," Via Education . . . and . . . Fellowship, to members and guests as they assemble at the HOLIDAY INN in Sioux City, Iowa, May 17, 18 and 19.

The "FELLOWSHIP" is always evident wherever medical assistants gather; the "EDUCATION" is scheduled in the following program:

Friday, May 17, 1968

4:00- 9:00 p.m. Registration
7:00- 9:00 p.m. Hospitality Time
8:00- 9:00 p.m. Executive Council Meeting

Saturday, May 18, 1968

8:00 a.m. Registration
8:00- 9:30 a.m. Continental Breakfast
8:30 a.m. House of Delegates

EXHIBIT AREA OPEN

10:30 a.m. General Assembly
Invocation
Welcome
President's Address

Mrs. Dorla Samsom, president
I.A.M.A., presiding

11:00-11:45 a.m. Program "Scanning the Horizon"
Panel
a Medical Assistant
a Certified Medical Assistant
a Coordinator—Medical Assistants' Education
Moderator—Lucille Holmes

12:00 noon Luncheon
Entertainment—Skittish Horizon

1:45- 4:00 p.m. Program—"Seven Tables to Unlimited Horizons"
1. "Legal Points"—Mr. Wm. E. Kunze, counselor, St. Joseph-Mercy Hospital, Sioux City
2. "Communications: Office/Hospital"—Mr. Dale Mogren, controller, St. Luke's Medical Center, Sioux City
3. "Medicare"—Mr. Robert Cox, physician relations representative, Blue Shield, Sioux City
4. "Title XIX"—Mr. John Larson, physician relations representative, Blue Shield, Cedar Rapids
5. "Family Services"—Mr. Jerome B. Anderson, director of Family Services, Sioux City
6. "Today's Collections"—Mr. Lawrence Slotsky, manager-owner, Credit Bureau, Sioux City
7. "Availingly Detail"—Mrs. Donna Walker, pharmaceutical representative, Bristol Laboratories, Cedar Rapids

There will be an intermission during this session.
"Coke Break," a courtesy of Chesterman Company, Sioux City

6:30 p.m. Social hour

7:00 p.m. Banquet
Entertainment: Variety Show

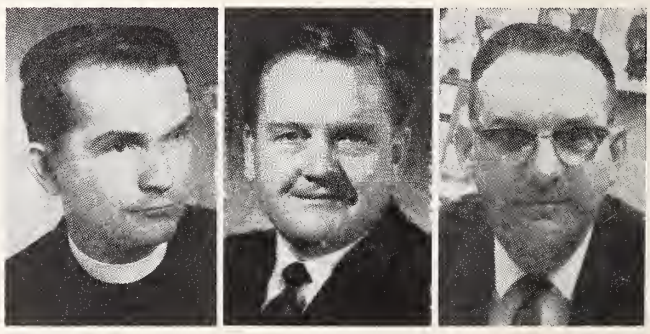
Sunday, May 19, 1968

8:30- 9:30 a.m. Breakfast

9:45-11:00 a.m. Program
Topic—"What Is Love?"
Panel
Minister—Dr. R. Franklin Terry, assistant professor of religion, Morningside College, Sioux City
Psychologist—Mr. Peter M. Brown, Sioux City
Educator—Sister Mary Lenz, English Department, Briar Cliff College, Sioux City
Physician—Robert C. Larimer, M.D., Sioux City

Mrs. Marian Little, Cedar Rapids, moderator

(Continued on page 412)



R. Franklin Terry, on the left, is an assistant professor in the Department of Religion, Morningside College. William D. Kunze, in the center, is a member of a Sioux City, Iowa, law firm. Robert Cox, on the right, is in the Physician Relations Department of Iowa Medical Service in Des Moines, Iowa.

when you want to provide the combined benefits of two accepted agents in the treatment of mild to moderate hypertension. (Contraindications: history of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.)

when you want to prescribe therapy that is generally well tolerated.

(However, adverse reactions may occur. For a complete listing, please refer to the full prescribing information which is summarized below.)

when your patient wants an easy-to-remember and reasonably priced regimen. (One tablet a day usually costs about a dime.)

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue 1 week before electroshock therapy, and if depression or peptic ulcer occurs. **Use in pregnancy:** Regroton should be used in pregnant patients or in women of childbearing potential only when, in the judgment of a physician, its use is deemed essential to the welfare of the patients; adverse reactions (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn. **Precautions:** Antihypertensive therapy with Regroton should always be initiated cautiously in post-sympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue Regroton therapy two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Regroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. **For details, see complete Prescribing Information.** (B)46-600-B

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Regroton® **Geigy**

11:30 a.m. Installation of 1968-69 Officers

12:00 noon Luncheon

1:00 p.m. Post-Convention Board Meeting

Motel Reservations are to be made directly with the Holiday Inn, 1401 W. Gordon Drive, Sioux City, Iowa 51103. Registration for the annual meeting is $15.00, and it includes the reception Friday evening, the breakfasts Saturday and Sunday, the luncheons Saturday and Sunday, and the banquet Saturday evening, plus all the educational and business sessions.

All registrants are urged to attend the House of Delegates meeting.

Mail registration forms and check to Miss Frances Hansen, 409 16th Street, Sioux City, Iowa . . . and do it early!!

—MARIAN LITTLE

Clinical Aspects of the Pulmonary Circulation

A symposium entitled "Clinical Aspects of the Pulmonary Circulation" will be presented at the Plaza Inn, Kansas City, Missouri, Friday and Saturday, May 3 and 4, under the sponsorship of the Missouri Heart Association, The University of Missouri School of Medicine, Ciba Pharmaceutical Company, Merck, Sharp & Dohme, Roche Laboratories, and Smith, Kline & French Laboratories.

Friday, May 3

8:45 a.m. "The Peripheral Pulmonary Vasculature: Some Practical Considerations"—Vernon E. Krahl, Ph.D., professor of anatomy, U. of Maryland School of Medicine

9:30 a.m. "The Clinical Spectrum of Pulmonary Embolization"—Arthur A. Sasahara, M.D., director, Cardiopulmonary Laboratory, West Roxbury, Massachusetts, VA Hospital

10:30 a.m. "Angiography, Surgery and Enzymes in Pulmonary Embolization"—Richard A. Sautter, M.D., Marshfield Clinic, Marshfield, Wisconsin

11:15 a.m. "The Clinical Use of Pulmonary Photoscanning"—Michael Usher, M.D., associate in nuclear medicine, Chicago Wesley Hospital, Chicago

12:30 p.m. LUNCH AND PANEL DISCUSSION

2:15 p.m. "The Medical Management of Acute Pulmonary Embolization"—Marvin Dunn, M.D., associate professor of medicine and director, Cardiovascular Laboratory, University of Kansas School of Medicine

2:45 p.m. "Pulmonary Hypertension: Etiology, Pathophysiology and Clinical Management"—John H. K. Vogel, M.D., associate professor of medicine and associate director, Clinical Cardiovascular Laboratories, University of Colorado

4:00 p.m. "Pathologic Changes in the Pulmonary Arterial Bed"—George Smith, M.D., director, Desert Research Institute, Reno

4:45 p.m. PANEL DISCUSSION

Saturday, May 4

8:45 a.m. "The Pulmonary Circulation in Chronic Bronchitis and Emphysema"—Philip Kimbel, M.D., Albert Einstein Medical Center, Pulmonary Disease Section, Northern Division, Philadelphia

9:30 a.m. "The Significance of Blood Gas Abnormalities"—John Pierce, M.D., associate professor of medicine, University of Colorado

10:30 a.m. "Circulatory Effects of Fat Embolism"—Leonard Peltier, M.D., professor of surgery and chief of orthopedics, University of Kansas School of Medicine

11:00 a.m. "The Electrocardiographic Changes in Pulmonary Emphysema and Cor Pulmonale"—David M. Pugh, M.D., assistant professor of medicine, University of Kansas School of Medicine

11:30 a.m. "The Circulatory Response to Low Flow Oxygen Therapy in Pulmonary Emphysema"—Thomas L. Petty, M.D., assistant professor of medicine, University of Colorado

12:15 p.m. LUNCH AND PANEL DISCUSSION

2:00 p.m. "The Clinical Effects of Commonly Used Medications on the Pulmonary Circulation"—Domingo Aviado, M.D., professor of pharmacology, University of Pennsylvania School of Medicine

3:00 p.m. "Congenital Abnormalities of the Pulmonary Circulation"—Jorge Espino-Vela, M.D., director of pediatric cardiology, National Heart Institute, Mexico City

4:00 p.m. PANEL DISCUSSION

4:45 p.m. ADJOURNMENT

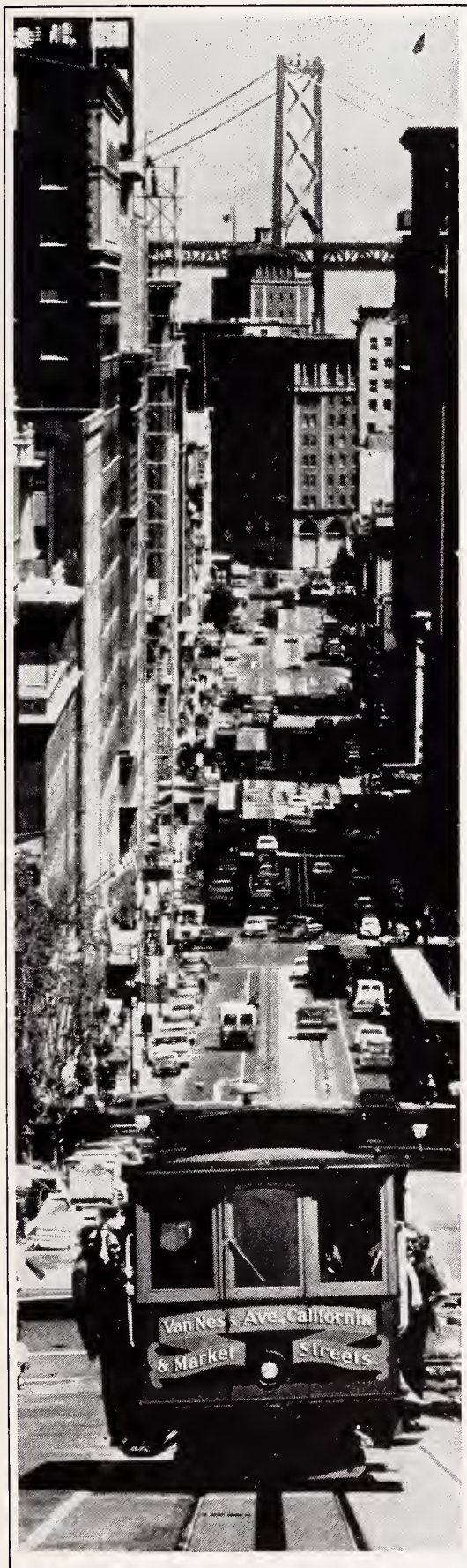
The program is acceptable for 14 hours of credit by the American Academy of General Practice.

NOTICE

CHANGE OF IAMA CONVENTION DATES

MAY 17, 18, 19, 1968

Holiday Inn, Sioux City, Iowa



SAN FRAN CISCO AMA '68

The excitement of San Francisco's famous sites is waiting for you. Chinatown, the Golden Gate Bridge, Fisherman's Wharf, Telegraph Hill, will add to five memorable and stimulating convention days. Plan to attend now and look forward to an excellent convention in a city of unlimited charm.

Continue your postgraduate education with a varied program of • four General Scientific Meetings on Auto Accidents, Health Care Planning, Infectious Diseases, Treatment of Advanced Malignant Disease • 23 Section Programs • Color Television • Medical Motion Pictures • and over 600 scientific and industrial exhibits. All are designed to bring you up-to-date on what is making medical news today. You will attend lectures by the nation's outstanding medical authorities and discuss with them the significant advances in medicine.

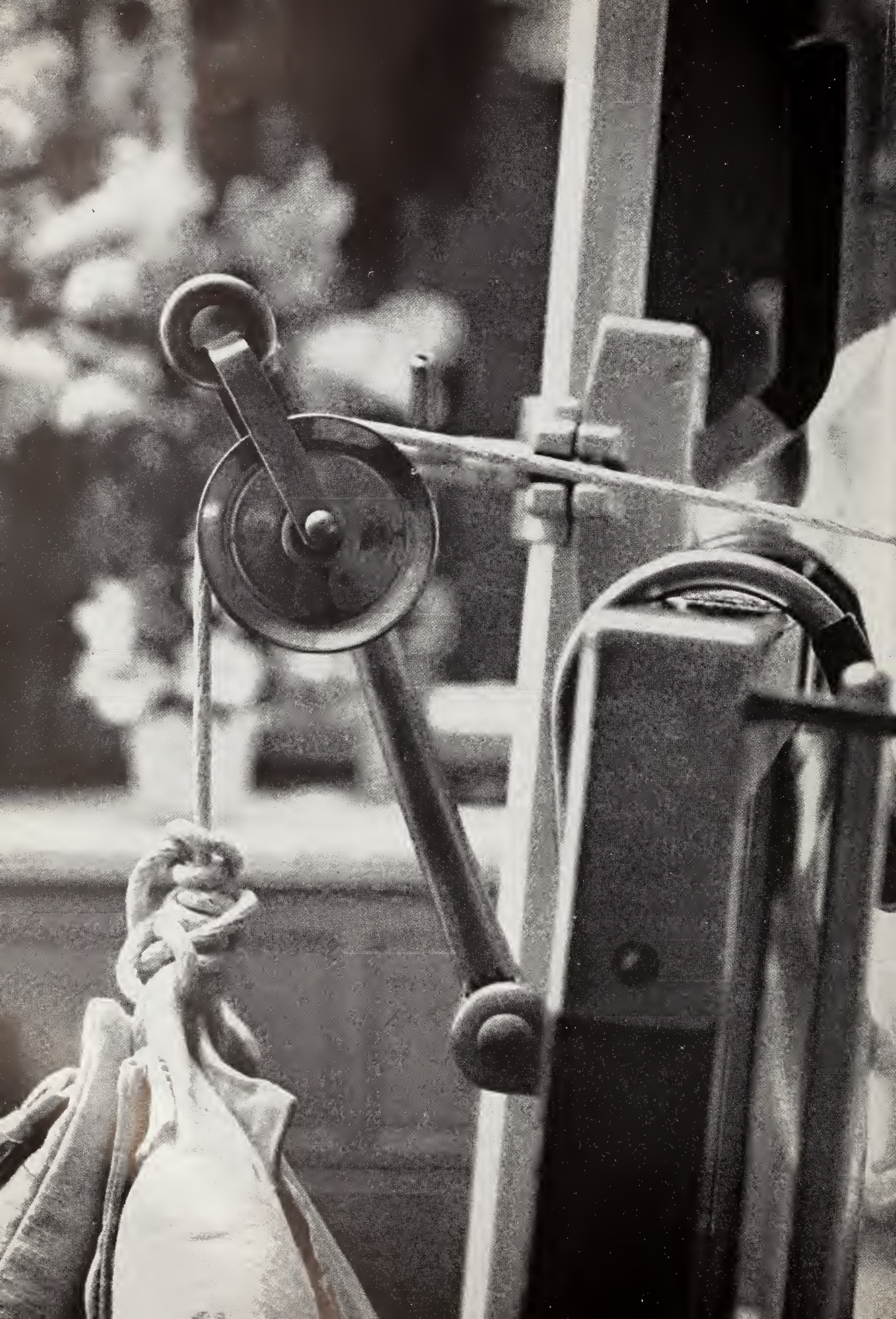
In addition the AMA TV network will present more than 40 hours of convention news.

Reserve now for the Scientific Awards Dinner in honor of the Scientific Award Winners—Wednesday, June 19, 1968. Since space is limited, we suggest you make your reservations before June 3, 1968. Tickets are $10.00 each, payable in advance.

The complete scientific program, plus forms for advance registration and hotel accommodations, will be featured in JAMA, May 6, 1968.

SAN FRANCISCO, CALIFORNIA · JUNE 16-20, 1968

AMERICAN MEDICAL ASSOCIATION'S 117th ANNUAL CONVENTION · BROOKS HALL





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Contraindications: History of sensitivity or severe intolerance to aspirin or meprobamate.

Warnings: USE IN PREGNANCY: Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of childbearing age only when the physician judges its use essential to the patient's welfare.

Precautions: Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate may result in dependence or habituation in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics. Withdraw gradually after prolonged high dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, caution patients against operating machinery or driving. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with immediate gastric lavage and appropriate supportive therapy (CNS stimulants and pressor amines as indicated).

Side Effects: Ethoheptazine and aspirin may occasionally cause nausea, vomiting, epigastric distress, and rarely dizziness. Overdosage may result in CNS depression (drowsiness and lightheadedness) or CNS stimulation and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]). Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically such as with epinephrine, antihistamine and possibly hydrocortisone. A few cases of leucopenia, usually transient, have been reported following continuous use. Rarely, cases of aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported; almost always, in the presence of known toxic agents.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

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When pain evokes anxiety and tension, thereby heightening patient discomfort, a simple analgesic may only touch on part of the problem.

This single-prescription, non-narcotic product, however, usually provides effective analgesia *and* helps put the patient's mind at ease.



who goes for checkups?

A vital question. For if early diagnosis and treatment can cure cancer, obviously regular health checkups are essential. In a survey conducted for the Society, we discovered that only 26% of those questioned had such regular checkups. But 90% said, *if their physicians told them to do so,* they would have annual checkups.

This confirmed what we have long known—your key role, doctor, in *activating* your patients in good health practices. We alert the public with facts about cancer. You follow through by urging regular checkups. A life-saving combination.

AMERICAN CANCER SOCIETY.

Woman's Auxiliary News

Gavel Gabble

Come to Des Moines Monday and Tuesday, April 29 and April 30, and have lunch with me at Hotel Kirkwood. I know we won't be able to talk at length, or about all the details we discussed at the meetings I attended in your counties, but it would be nice to renew all those friendships and let all of you get acquainted with each other.

A Continental Breakfast at Hotel Fort Des Moines, on Monday morning with the doctors, will start off the first day with a new sharing of a legislative speaker, the Honorable Gerald Ford. After a business meeting at Hotel Kirkwood, we will lunch together and will listen to southwest Iowa's Representative in Congress, William Scherle and his wife Jane tell us about some of their views regarding "A Freshman in Congress." These people are both personable and easy to get acquainted with, and we hope you will avail yourself of the opportunity to hear them. Dr. Otis Wolfe will be with us, and will share some of his enthusiasm and wisdom about IMPAC.

For those of you who wish to shop, there will be plenty of time this year. You will have the late afternoon and the evening, on Monday, for the stores remain open that night. We are trying to comply with the requests of the out-of-town members to devise a workable schedule for them.

Mrs. C. C. Long (Esther), our national president-elect, will be our national representative! She will be here both days waiting to meet you and to know the Iowa Auxiliary. Take advantage of this opportunity, and introduce yourself. She likes to spread her "Arkansas Fellership" wherever she goes, and we shall try to help her spread it through Iowa. She will be our featured speaker at the Tuesday luncheon. Don't miss it.

I shall be busy during convention, but not too busy to talk to you. Be sure to stop me as I hurry about my tasks, and say "Hello." It will be such fun to see you again.

—Elaine Olsen, *President*

REMEMBER

Annual Meeting—April 28-30
Hotel Kirkwood, Des Moines

BE THERE?

Why? Annual Meeting and Convention!!!

It may come as a surprise to some of us to learn there are people who feel quite strongly that conventions are nothing more than business sessions and uncontrolled "yakking."

It's probably safe to say, too, that like most other organizations, medical societies and Auxiliaries have their hard cores of convention-goers. We see these folks year after year, and we realize regular attendance has become at least one important facet of their ways of life. The more we see these conventioneers, the better we understand and appreciate their desires, hopes and motives.

The purpose of this little piece is to probe under the surface of the always apparent atmosphere at conventions in search of values that may not at first meet the eye.

The first and most important aspect of any convention is the business of working sessions. Let's take a moment to expand this thought. The Woman's Auxiliary to the Iowa Medical Society, by being a grass-roots organization, is controlled by the general membership. It does have an Executive Board which works with the Board of Directors and it does have an administrative secretary who coordinates the many phases of our organization with that of the Medical Society.

But the constitution and by-laws, everything that relates to the frame of reference within which our districts and their groups operate, are debated and resolved by the membership at large at THEIR convention. The delegate voting system prorated to the size of the individual group is rigidly adhered to, so that executive officers and board members with only one vote each can not possibly outweigh the combined voting strength of all the delegates in attendance.

So, obviously, The Woman's Auxiliary is run by its members in conventions where dedicated, concerned women work together to improve, to enlarge and to perpetuate their cause. It would seem, then, that as the convention business session goes —so goes Auxiliary.

Now, if you agree even partially that the business sessions are the core and heart of the convention, we can turn quickly to the many "by-products" which quickly accrue from the "togetherness" necessitated by these sessions.

First of these by-products has to be the renewing of old friendships. Is there any real substitute for

the cries of delight which pierce the air when women from across the State—and from neighboring states—first spot each other and then rush to consummate the friendliest of greetings? The warmth generated from these greetings is a beautiful thing to witness and to experience.

Secondly, and just as rewarding, is the making of new friends. It's a great thing to see acquaintanceships grow to casual friendships, and finally to see this spark brighten and then mellow into lasting friendships.

Then there are the inspirational experiences that come from being part of a large group of similarly minded folks. There is a lift and the enthusiasm engendered by speakers.

Conventions "turn you on," as the kids say. They tend to heighten our preception and sharpen our perspective. We can return to our local groups with renewed enthusiasm and a contagious optimism about Auxiliary that will surely infect the folks who had to stay at home.

Not the least of the rewards or values we receive is accepting the hospitality of the Annual Planning Committee and the Local Arrangements Committee. Months of loving labor and planning have been given to insure success of the entire undertaking. To witness their enthusiasm and their pride and to accept happily and gratefully so much that is a part of them, just has to be mighty heartwarming.

If *YOU* and *YOU* and even *YOU* haven't as yet attended one of YOUR State meetings, why not plan to do so now? You will go away happier and a better informed person than when you arrived.

You'll have worked hard with your fellow members to help solve chronic problems. You will have played hard too. You'll have renewed and revitalized old friendships and broadened your horizons by making new ones. You'll have received inspiration and rejuvenation and had fun and relaxation doing it. More importantly, you will have reconfirmed your faith in the philosophy of "Medicine's Helpers."

All this will have added up to a warm, rewarding, memorable experience—and that, my friendlies, is Auxiliary. SEE YOU AT STATE MEETING IN DES MOINES, APRIL 29-30, 1968.

—MRS. JAMES F. BISHOP
President-Elect

AMA-ERF Fund Raising Projects

Note Paper
Playing Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036

or

Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

Our Guest From the National Auxiliary



Mrs. C. C. Long

Mrs. C. C. Long, of Ozark, Arkansas, president-elect of the Woman's Auxiliary to the American Medical Association will be the National Representative attending the Iowa Auxiliary Annual Meeting. She served two years as national first vice-president, and served three years as national rural health chairman, as well as southern regional health-careers chairman for one year.

On the state level, she has held various chairmanships including community service, legislation, program and safety. She served as state president in 1960-61, and also was president of her county Auxiliary.

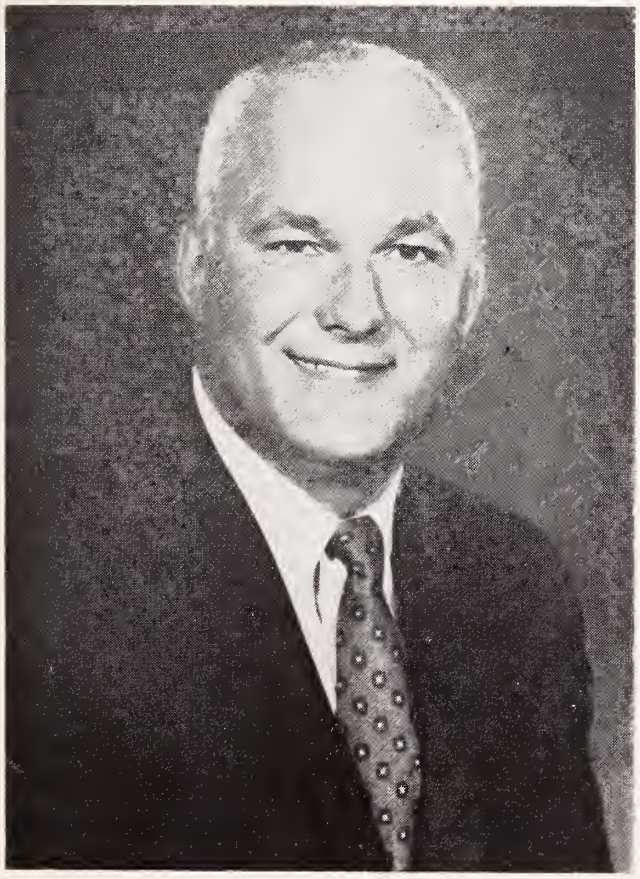
Esther Long attended Topeka, Kansas, grade and high schools, Washburn College and Kansas University, where she met and married Clifton C. Long in 1940. While he attended medical school at the University of Arkansas, Mrs. Long worked as a secretary to the anatomy and chemistry departments at the school. Dr. and Mrs. Long have four children: Cliff III (married), is a student at Arkansas Tech Business School; Mary is a senior at Southeastern Louisiana College; Joan is a senior at Ozark High School; and June is in the tenth grade at Ozark Junior High.

Mrs. Long's interests and activities branch out

into many other community activities. She has served in the PTA (as president), and in the WSCS of the Methodist Church, was named Arkansas Woman of the Year in 1964 by PROGRESSIVE FARMER, and was awarded the honorary degree of Chapter Farmer by the Ozark FFA in 1964. She was appointed to the Board of the Arkansas Girls Training School in 1961, and, after serving for one five-year term was reappointed in 1966. In 1968 she was appointed to the Governor's Advisory Committee on the Status of Women. She was vice-chairman of the board for four and one-half years, and then chairman, a position in which she still serves. Mrs. Long was responsible for starting Brownie, Girl Scout and Cub Scout programs in Ozark, and served as leader for all of the groups in past years.

Southwest Iowa's Congressman

William J. Scherle, Republican, of Henderson, was born March 14, 1923, in Little Falls, New York; graduated from St. Mary's Academy, in New York; attended Southern Methodist University in Dallas, Texas, majoring in business administration. He is a veteran of World War II; he was assistant divisions manager of the George D. Barnard Co., in Dallas. He married Jane Goldapp of Council Bluffs, Iowa, in June 1947, and they have two sons, William David and John Robert. He is a grain and livestock farmer; is a member of Holy Rosary Catholic Church, Glenwood, Iowa. He has been a Young Republican, a precinct committeeman; the chairman of the Mills County Republican Central Committee for three terms; a colonel on the Governor's military staff, a member of the Legislative Interim Committee in 1963-65, and of the Legislative Research Committee. He was named an outstanding legislator by the Iowa Press Corps in the 60th General Assembly of Iowa State Legislature; he was chairman of the Senate and House Highway Study Committee; he received the 1964 Award of Merit from Iowa Good Roads Association, served in the House of Representatives in the 59th, 60th, 60th extra, and 61st Iowa General Assembly. He belongs to the American Legion, the Naval Reserve, the Veterans of Foreign Wars, and the Farm Bureau. He was elected to the 90th Congress November 8, 1966, where he is a member of the Education and Labor Committee; a member of the Republican Task Force on Agriculture; and a member of the Defense Transportation Committee of the National Rivers and Harbors Congress.



Hon. William Scherle

Around the Hawkeye State

Black Hawk

The Black Hawk Woman's Auxiliary realized a profit of $1800.00 from the annual Medical Ball it held recently at the Electric Park Ballroom. The theme for the ball was roses, and it featured outstanding garden settings.

The evening's activities included dinner, entertainment by the Medicats (an instrumental group composed mainly of doctors), and dancing from 10 p.m. to 1 a.m. The Rubber Band, a group from the University of Northern Iowa, in Cedar Falls, provided entertainment during the dance intermission. Proceeds from the Ball were donated to the Black Hawk Development Center for its needs and to purchase furnishings for the nurses' room at the Center.

Dallas-Guthrie

The Dallas-Guthrie Medical Society and its Auxiliary met for dinner in January in Dexter at Library Hall. Hosts were Dr. and Mrs. K. M. Chapler and Dr. C. R. Osborn.

Following the medical presentation by Dr. Chester Woodburn, a Des Moines otolaryngologist, the two groups held separate business sessions. Members of the Auxiliary held their meeting in the library room, with Mrs. E. E. Lister, county president, presiding.

New officers for the Dallas-Guthrie Auxiliary are: Mrs. William Seidler, Jr., president; Mrs. N. L. Krueger, president-elect; Mrs. Richard Peterson, first vice-president; Mrs. W. A. Wildberger, second vice-president; Mrs. P. L. Weigel, secretary; and, Mrs. Herbert Neff, treasurer.

Dubuque

Officers recently named at a Dubuque County Auxiliary meeting are: Mrs. R. P. Rusk, president; Mrs. T. C. Piekenbrock, vice-president; and Mrs. D. K. Packard, secretary-treasurer.

Palo Alto

The following officers were named at a recent meeting of the county Auxiliary: Mrs. Carroll Sinnard, president; Mrs. R. J. Brink, vice-president; and Mrs. Lowell O'Connor, secretary-treasurer.

Polk

The Iowa Society for the Prevention of Blindness recently honored four Polk County Auxiliary members for 10 years of service in the Des Moines Vision Screening Program. They are: Mrs. Earl L. Redfield, Mrs. Floyd M. Burgeson, Mrs. Henry H. Gurau, and Mrs. Leo R. Pearlman.

Pottawattamie

The Pottawattamie County Medical Auxiliary was hostess for a benefit luncheon and card party at the Elks Country Club in March. Mrs. Jim Bixler, of the House of Replica, demonstrated the technique of transposing prints to canvas. Mrs. Jose Martinez and Mrs. Maurice Margules were co-chairmen for that event. Mrs. James L. Knott is president and is assisting the committee. Proceeds from the event will be directed to an accumulative fund for the two local hospitals.

Woodbury

New officers assuming duty January 1 in Woodbury County were: Mrs. John Kelly, president; Mrs. William Davey, president-elect; Mrs. Donald Kivlighn, vice-president; Mrs. Robert Larimer, secretary; and Mrs. Earl Mumford, treasurer.

Scott

Several members of the Scott County Medical Auxiliary assisted with plans for the annual Heart Fund dance held at Hotel Blackhawk, in Davenport, on February 24. Mrs. Gordon Rock was chairman of the dinner that preceded the dance.

WASAMA

We of WASAMA admire and often envy THE doctors' wives—especially the members of the Woman's Auxiliary to the Iowa Medical Society who seem to direct their thoughts our way despite their very demanding schedules. As medical students' wives, occasionally we cannot imagine THE day when our husbands will complete medical school, an internship, military service and perhaps a residency, and finally set up a practice. Yet these years of medical school are enlightening to Iowa's WASAMA members. As our husbands prepare to offer their services, so must our organization. Service projects include monthly visits to the Johnson County Home, offering stimulating crafts to appreciative patients, and the collection of food and clothing baskets along with Christmas gifts and a tree for a needy family. Chapter funds are supporting a medical student scholarship and have financed playground equipment for the pediatric ward at SUI Hospitals. An educational note is added by our monthly speakers—doctors we have selected to inform us of their specialties. Also important are the social aspects of WASAMA, an absolute necessity since our husbands seem to spend 24 hours a day, seven days a week at the hospital! Our chapter also actively participates in regional and national conventions for exchanges of ideas, for our personal benefit, as well as for the enrichment of the chapter. Highlights also enjoyed by our 60+ membership include our annual Fall Tea, a Christmas party for members' children, and in the near future the Spring Luncheon, the Regional and National conventions, and finally, the Senior Farewell. It has been a very busy and exciting year, not to mention bridge and knitting groups, and the editing of five issues of the MEDIGRAM, our chapter newsletter.

Serving as president of the Iowa Chapter of WASAMA this past year has been an honor as well as a most rewarding personal experience I'm certain to cherish as a physician's wife. But I longingly await the day when I will join WASAMA's "mama," WA-AMA.

—MRS. RICHARD ADAMS (CANDY)

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. Max E. Olsen, Minden 51553

President-Elect—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

Recording Secretary—Mrs. P. H. Tenney, 203 Second Avenue, S.W., Independence 50644

Treasurer—Mrs. Paul From, 3814 Muskogee Avenue, Des Moines 50312

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Co-Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322



Personals



At the thirty-fifth annual meeting of the Lutheran Hospital medical staff, in Fort Dodge on February 22, **Dr. John Kelly** succeeded **Dr. Don Bock** as president. **Dr. F. Douglas Lawson** was chosen as president-elect; **Dr. J. G. McCarroll** as vice-president; and **Dr. N. A. Schacht** as secretary. **Dr. William E. Connor,** of the U. of I. Department of Internal Medicine, spoke on the contributory effect of cholesterol in heart disease.

Dr. Russell Barrett, a medical graduate of Tulane University, New Orleans, who is interning at Iowa Lutheran Hospital, Des Moines, has agreed to open a general practice in Rockford next July. The townspeople are conducting a fund-raising drive for the construction of a two-doctor office building, and Dr. Barrett says he has arranged to have a man who now is a senior medical student at Tulane join him in Rockford as soon as he completes his internship. Dr. Barrett served in the Marines from July, 1954, to July, 1957, before starting the study of medicine.

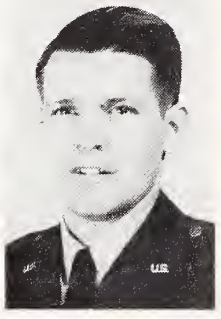
Dr. Richard L. Vaught has joined **Drs. Lawrence E. Pierson** and **John A. McFarlane** in the practice of urology in Sioux City. Dr. Vaught is a graduate of the Indiana University Medical School, and he interned and served a residency in his specialty at the U. S. Naval Hospital in St. Albans, Long Island. Prior to his discharge from the Navy in February of this year, he was chief of pediatric urology and assistant chief of the Department of Urology at the U. S. Naval Hospital in San Diego.

Dr. David W. Wetrich returned to Ottumwa, in mid-February, from Vietnam, where he had served with the Army Medical Corps. It is said that he plans to take residency training in Iowa City.

As of April 1 **Dr. Charles N. Hyatt** became chief medical officer at the Men's Reformatory, in Anamosa. He has been in private practice at Corydon for 30 years, except for his World War II Army service from 1941 to 1946.

Dr. Thomas C. White has dissolved his partnership with **Drs. A. H. Grau** and **T. S. Hutcheson** and has set up a solo general practice in Denison.

One of five men who were honored at the Jaycees annual Distinguished Service Award Banquet, in Sioux City on February 24 is **Dr. Gerald J. McGowan.** He was recognized as an "Outstanding Young Man." A native of Sioux City, he graduated from Heelan High School, there, and from Carrol College, Helena, Montana. He took his M.D. degree at the U. of I. in 1963, and interned and served a surgical residency in Phoenix. He began private practice in his home town in 1965, and was instrumental in establishing the Siouxland Council on Alcoholism last year. He also helped establish the Sioux City office of the Iowa Comprehensive Alcoholism Project and its clinic, which meets each Thursday night at St. Joseph Mercy Hospital. Currently he is dispensary commander of the 185th Tactical Fighter Group, Iowa Air National Guard, which was activated in January.



Dr. Donovan F. Ward, a Dubuque surgeon, has been named a director of Executive Data Systems, Inc., of Cedar Rapids, a publicly held corporation organized in 1966 to provide computerized data-processing services, but specializing in hospital and medical data systems. Dr. Ward is also a founder and a director of Life Investors Insurance Company of America, which has its headquarters in Cedar Rapids. He is a past-president of the AMA.

The members of the Wapello County Medical Society and its Woman's Auxiliary held a joint meeting at the Ottumwa Country Club on March 5, and heard a program on "Man in Space." The guest speaker was **Adrian E. Flatt, M.D.,** of the U. of I. Department of Orthopedic Surgery.

Dr. P. W. VanMetre, a long-time physician at Rockwell City who is to retire soon as medical consultant at the Women's Reformatory there, was honored on February 28 at a luncheon there. A citation and award was given him by the State Executive Committee, and gifts from the staff of the institution were also presented to him. Dr. VanMetre came to Rockwell City at the close of World War I, after serving for a number of years as a missionary physician in the orient. He is 90 years of age and a Life Member of the Iowa Medical Society.

A bright, cheerful playroom at Jennie Edmundson Hospital, Council Bluffs, converted from a storage room, was dedicated on February 28 to the memory of the late **Dr. I. M. Ozaydin.** It has carpeting, floral draperies and built-in cabinets and bookcases, and contains a library and toys, games and crafts. It is staffed by two volunteers per day, one of whom conducts activities there and the other takes materials to the child patients who are unable to leave their beds.

Dr. Gordon M. Arnott, of Knoxville, spoke to the newly formed Seventh Day Adventist Ladies Organization in Nevada on March 26. His topic was "Mental Health for Homemakers," and his audience numbered 24.

Dr. Waclaw Olejnick is to join the staff of the Mental Health Institute at Clarinda in mid-April. He came to this country from Poland in 1955, and is a psychiatrist.

Dr. and Mrs. Glenn S. Rost, of Lake City, took a winter vacation trip late in February. Dr. Rost attended the sectional meeting of the American College of Surgeons, in Dallas, and afterward he and his wife visited friends in Phoenix.

Dr. Leonard Lackore, of St. Ansgar, spent only 10 days instead of the two months he had expected to stay in Vietnam in the AMA Volunteer Physicians' Program, in February. Moreover, throughout those 10 days he and several other U. S. doctors were confined in the building, a former hotel, that houses the USAID headquarters. The Tet invasion of Saigon occurred before the physicians could leave for the provincial hospitals to which they had been assigned. No fighting occurred within that building, but there was fear that some of the combatants might try to hide there, so the doors were kept barricaded. Fighting could be seen in the streets on either side of the seven-story structure, and continuous bombing and flares made sleep almost impossible. Refugees and wounded soldiers and civilians could be seen streaming to a Red Cross center just across one of the streets.

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TO THE MEMBERS OF THE IOWA MEDICAL SOCIETY

Dear Doctor:

We are very pleased to inform you that for the FIFTH CONSECUTIVE YEAR the Commercial Insurance Company, the underwriter of your IMS Group Accident and Sickness Disability Income Insurance Program, has extended the TEN PER CENT INCREASED DISABILITY BENEFITS WITHOUT ADDITIONAL PREMIUM. These annually increased benefits are based upon the wide participation, in this Program, by the Members of IMS and the favorable claim experience.

Please remember that under the IMS Disability Program, Now, *you get ten per cent more benefits than you pay for.*

Please, also, consider these outstanding advantages of the Iowa Medical Program:

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 Benefit waiting periods up to 6 months with substantial reduction of premium cost.
- Complete choice of Weekly Income Protection from $25 up to $250 per week ($1080.00 per month), subject to age and insurability limits.
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Enroll Today!

Your insurability is a great asset

Sincerely,

THE PROUTY COMPANY

Dr. Lackore says that his group knew nothing about the attack upon the U. S. Embassy until it was over, though the building was no more than a half-mile away from them. Indeed he says he and his companions were far less well informed about what was happening around them than was the American public. There were no commercial flights out of Saigon, and he was glad to hitch a ride out on a USAID plane bound for Honolulu.

At its February 14 meeting at the Hotel Pinicon, in Independence, the Buchanan County Medical Society heard an account by **Dr. James E. Whitmire,** of Sumner, of his recent two-month tour of duty with the AMA Volunteer Physicians program in Vietnam. On February 8, he had made a similar presentation at a meeting of the New Hampton Lions Club.

Dr. John E. Griffin, a medical graduate of the University of Oklahoma, joined **Drs. Charles R. Burroughs, Robert McClung, Earl J. McKeever** and **Dwight A. Mater** in Knoxville. Dr. Griffin received specialty training in surgery at the Des Moines VA Hospital, and during the three years that have elapsed since then he has practiced in DeQueen, Arkansas. He and Dr. McKeever were in the Army together, at Fort Riley, Kansas, in 1961-1963. Dr. and Mrs. Griffin have three daughters, aged 10, 7 and 2 years.

A four-county Health Planning Council for Southeast Iowa was organized at a meeting in Burlington on March 18. In addition to Des Moines, the counties are Henry, Lee and Louisa. **Dr. F. G. Ober,** a Burlington orthopedist, had explained the area-planning concept at a meeting of hospital officials there, on February 27, and it was then that the four-county gathering was planned.

Dr. James Hendricks, of Clear Lake, talked at a meeting of the United Presbyterian Women, in Mason City on March 27, about his work with Vietnamese civilians from October 4 to December 8, 1967, when he served with the AMA Volunteer Physicians program.

An Iowa Falls doctor, **Loren Parker, M.D.,** was the principal speaker at the annual combined meeting of the PTA's in Perry, on February 22. He talked about the month he spent in Guatemala last summer with the AMDOC project. Perry was his boyhood home town.

Dr. L. H. Prewitt, of Ottumwa, secretary of the Clinical Society of Ocular Allergy and Immunology, presided at two sessions of its annual meeting in New Orleans in mid-February. The physicians who were present numbered about 500. The organization, a comparatively new one, is concerned with pathologic changes such as scarring of the cornea, cataracts, iritis, optic neuritis and loss of vision resulting from sensitizations that are of either external or internal origin, Dr. Prewitt says.

Dr. A. R. Powell, of Elkader, was elected president of Central Community Hospital, Inc., there, on February 13.

On February 15, **Dr. R. M. Nielsen,** of Charles City, was the guest speaker at a meeting of the Northeast District Iowa Society of Radiological Technologists, at the Floyd County Memorial Hospital, there.

An article in the February 12 issue of the CLARINDA HERALD-JOURNAL reported that at least six of the buildings at the Mental Health Institute there are partially or wholly unused in consequence of a decline in patient population from 1,600 to 400 in the past 20 years. **Dr. Paul E. Huston,** head of psychiatry at the U. of I. and director of the Iowa Mental Health Authority, is quoted as having said he is not yet ready to consider closing the state mental health institutions, and that he favors permitting all four institutes to become smaller so that they can be operated more efficiently. But the article reflects a desire to have the number of patients increased by any of a number of means. The possibilities reviewed included mental health services for retarded children from Glenwood and Woodward; a child psychiatry service like the ones at Mt. Pleasant and Independence; and a treatment center for alcoholics. The statement was made that when it was opened in 1885 the Clarinda hospital had the greatest floor space of any hospital in the world.

Dr. Henry M. Perry, of Bloomfield, attended the annual postgraduate course of the Philadelphia (Penna.) County Medical Society during the latter part of February.

Vandals wrecked the offices of several doctors at the Sioux City Medical Clinic, 2417 Pierce Street, during the night of February 14-15. Narcotics and about $50 in cash were stolen. Several veteran policemen said the destruction was the worst they had ever seen. Door casings were torn off and the bottoms were kicked out of drawers, in some instances, and in one office the outgoing mail had been torn to shreds. The physicians are **Drs. P. W. Osincup, John Tiedeman, G. J. McGowan, F. J. Lohr, J. L. Wiedemeier, D. M. Youngblade, R. C. Mugan, H. E. Rudersdorf** and **Rex L. Morgan.**

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Dr. Montague S. Lawrence, a professor of thoracic and vascular surgery at the U. of I. College of Medicine, was the speaker at a Ladies' Night program of the Kiwanis Club in Mount Pleasant on February 19.

Dr. Jack D. Fickel, of Red Oak, is to serve as chairman of a committee that will work with the Iowa Employment Security Commission in surveying the manpower resources and needs of Montgomery County. The IESC has conducted such studies in 30 counties during the past two years. Currently, surveys are also being planned in Page, Fremont, Harrison, Mills and Pottawattamie Counties.

Dr. Ross King, of Clinton, spoke on alcoholism at the April 14 meeting of the Kiwanis Club there.

At a meeting of the Ames chapter of the Christian Business Men's Committee International, on February 15, **Dr. Martin G. Ericsson,** of Cedar Falls, spoke on "An Iowa Doctor in the Congo."

Dr. Robert Reed is the director of the recently established intensive-care unit for coronary patients at Iowa Lutheran Hospital, Des Moines, and **Dr. Alexander Matthews** was chairman of the committee that selected the equipment and made plans for the installation. Similar units have recently been set up at Broadlawns and Mercy Hospitals, and one has been in operation for two or more years at Iowa Methodist Hospital, Des Moines.

Dr. J. F. Veverka, of Prairie City, has been named chief of general practice at Broadlawns Polk County Hospital, Des Moines.

At the March 6 meeting of the Johnson County Medical Society, the guest speaker was **Rev. Mr. Russell C. Striffler,** chaplain at Iowa Methodist Hospital, Des Moines. It was held at the University Athletic Club, and the religious leaders of Iowa City were invited to attend as guests of the Society.

Dr. Glendon Button, of Conrad, and **Dr. W. H. Verduyn,** of Reinbeck, have been appointed deputy medical examiners for Grundy County, succeeding **Dr. James Scott,** of Grundy Center. Dr. Scott's partner, **Dr. Donald Preuss,** continues as chief medical examiner.

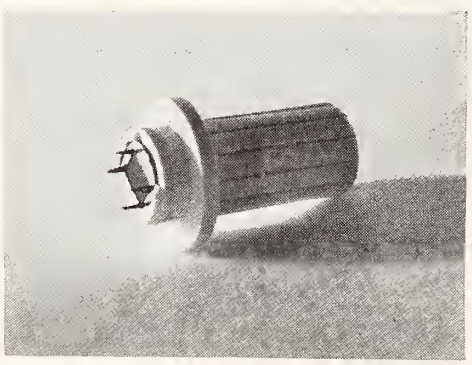
Dr. T. E. Shea, of Storm Lake, addressed the February 29 meeting of the Buena Vista County Hospital, there, on the proposed coronary-care unit for the institution.

The March 3 concert of the Wartburg College Symphony Orchestra, at Waverly, was presented as a memorial tribute to the late **Dr. Rosalie Turner,** of Nashua, who played viola in the orchestra from its inception until her death in 1967. A viola scholarship has been established in her name at the College.

The New Hampton area physicians are conducting a series of instructional programs for Chickasaw County hospital employees, policemen, firemen, civil defense workers and other people who have occasion to care for the ill or injured. On February 20, **Dr. A. L. Murphey,** of Fredericksburg showed the movie "Pulse of Life" and conducted drills with Rescussi Annie. On March 6 the topic was "Shock," and **Dr. James C. Carr** was the discussion leader. **Dr. Dennis R. Olsen** conducted a program on "Burns," March 20. **Dr. H. S. Jacobi** was in charge March 27, and the subject was "Helping Hands." **Dr. C. W. Rainy,** of Elma, is to

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lead a program on "The Mentally Disturbed," April 10. "Drowning" will be **Dr. E. C. O'Connor**'s topic on April 24. "Legal Aspects" will be presented on May 8 by **Dr. J. E. Murtaugh** and **County Attorney William Wegman.** In each instance the program has been or will be presented twice—on the evening of the date listed above and on the morning of the following day. Except as otherwise noted, the physicians practice in New Hampton.

Dr. Gardner D. Phelps, a Waterloo ophthalmologist, went to Honduras, early in March, to serve five weeks as a volunteer visiting specialist with MEDICO, a subsidiary of CARE. At the Hospital de Occidente, in Santa Rosa, Honduras, a CARE-MEDICO team is expanding and upgrading medical treatment and is training counterpart personnel with the aim of making the institution a model for the rest of the country. Dr. Phelps was accompanied there by his wife, **Virginia,** and their son **Gary,** a senior at the U. of I. College of Medicine. Dr. and Mrs. Phelps have three other sons, of whom two are physicians—**Charles,** a resident in ophthalmology at the U. of I., and **Dale,** who is to begin a residency in orthopedic surgery in San Francisco next July. Their non-M.D. son, **Laurence,** is a candidate for the Ph.D. in biology at the University of Wisconsin.

This is the fourth successive year in which Dr. Gardner Phelps has taken a "working vacation" by assisting in medical missionary work. His previous service took him to Brazil, Haiti and Bolivia. In his spare time he is a ham radio operator.

Members of the Lions Club at Marshalltown heard **Dr. Robert Mandsager** speak on "Medicine in Africa" late in February. He spent 10 years as a medical missionary there before returning to Iowa recently.

Dr. John M. Rhodes, of Pocahontas, showed a film and lectured on circulatory diseases at a meeting of the Women's Fellowship of the Congregational Church, in Fonda, February 21.

Dr. C. W. Byrnes, of Dunlap, a medical examiner for Harrison County, attended a meeting of the National Association of Medical Examiners in Chicago on February 22-24.

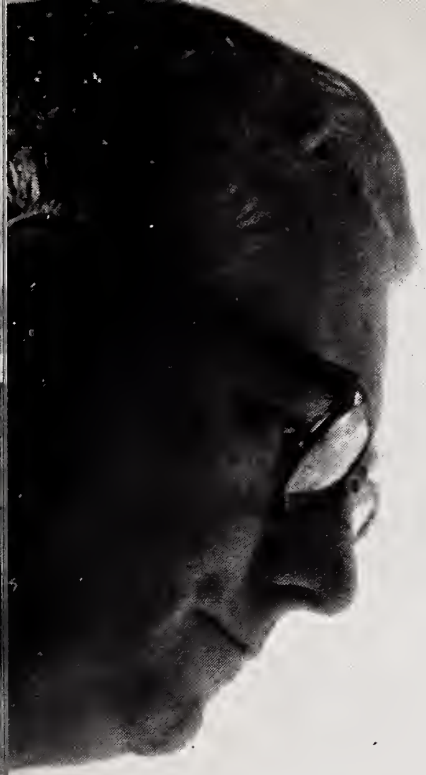
The Jaycees at Holstein presented a distinguished service award to **Dr. J. W. Martin,** on February 25 at a ceremony in the high school auditorium there. It was in recognition of his 30 years' service to the community.

Dr. Charles Johnson, an assistant professor of pediatrics and assistant director of the Child Development Clinic at the U. of I. College of Medicine, chaired a panel discussion at a Workshop on Recreation and Physical Education for the Mentally Retarded held in Iowa City on March 1.



The Phelps family pictured from left to right, Dale, Gary, Charles and their father, Dr. Gardner D. Phelps, a Waterloo ophthalmologist.





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On March 15, **Dr. George Baker,** an assistant professor of pediatrics and director of the Iowa Infant Study at the U. of I. College of Medicine, presented an AMA-sponsored lecture "Recent Advances in Pediatric Nutrition" and conducted a seminar on public health at Fort Hays State College, Hays, Kansas.

At the March 6 meeting of the Senior Bureau of the Cedar Rapids Chamber of Commerce, **Dr. F. W. Mulsow** spoke on "LSD—Its History and Future in Medicine." He showed that the drug is not all bad, and that in proper hands it is useful in some cases.

Dr. Gerald Solomons, an associate professor of pediatrics at the U. of I. College of Medicine, discussed the Doman Delacato system of treating brain-injured children at a meeting of the Johnson County chapter of the Iowa Association for Retarded Children on February 19, and on February 21 he lectured in Amana on "Current and Future Applications of Drug Therapy for Children with Specific Learning Disabilities," at a meeting sponsored by the State Department of Public Instruction.

Dennis K. Mann, D.V.M., has been appointed to the staff of the State Hygienic Laboratory. He attended the University of Illinois and Tulane University, and holds a B.S. in chemistry, an M.S. and a Ph.D. in veterinary medicine as well as his D.V.M., and an M.S. in public health. Most recently he has held a post-doctoral USPHS fellowship and served as a research associate at the College of Veterinary Medicine at the University of Illinois, in Champaign-Urbana. He will supervise consultative and training services that the State Hygienic Laboratory offers to medical laboratory personnel throughout Iowa.

At a seminar on cooperation between physicians and clergymen in the care of the elderly, sponsored by the Bremer County unit of the Iowa Heart Association, in Waverly on Tuesday, February 6, the principal speakers were **Dr. W. A. Tice,** a Waterloo psychiatrist, **Dr. H. W. Rathe,** a Waverly internist, and **David Belgum, Ph.D.** a faculty member at the U. of I. School of Religion. Dr. Tice took issue with our economic system for having no use for old people. "They must be made to feel useful," he said. "Lack of function for the aging is destructive!" Dr. Rathe asserted that subconsciously, old people develop certain characteristics in an effort to satisfy their need to feel useful. Some show courage and maturity, but others are negative—showing fear and suspicion. Since physicians, clergymen and the others of us with whom the elderly come in contact evoke one or the other of those attitudes, he declared, "we make our own bed by the way we treat the aging."

Dr. H. K. Merselis, of Audubon, addressed a meeting of junior and senior girls at the high school there, on January 24, on gynecologic cancer. He showed two moving pictures and a film strip from the American Cancer Society, Iowa Division, Inc. to illustrate his lecture.

At the March 14 meeting of the Linn County Medical Society, at the Cedar Rapids Country Club, **Dr. Fletcher A. Miller,** of Creighton University Medical School, spoke on the surgical management of hypercholesterolemia. Dr. Miller is head of the Creighton Department of Surgery.

Dr. Leslie Bernstein, an associate professor of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, has been given the Harris P. Mosher Memorial Award of the American Laryngological, Rhinological and Otological Society for his thesis entitled "The Effect of Timing of Cleft Palate Operations on Subsequent Growth of the Maxilla." He will present an abstract of his paper at the Society's annual meeting in Hollywood Beach, Florida, April 23. The findings he reports are that growth and development of the upper jaw and the appearance of the mid-third of the face are less satisfactory if a cleft-palate operation is performed in patients younger than 24-30 months of age, when all of the temporary molars reach proper occlusion.



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Dr. Bernstein holds medical and dental degrees from the University of the Witwatersrand, Johannesburg, South Africa. After completing his specialty training, he took additional post-doctoral study in England. He was awarded a gold medal in general anesthetics and a diploma in otolaryngology by the Royal Colleges of Surgeons and Physicians. Before coming to the U. of I. in 1960, he was associated with the Wernher Research Unit on Deafness, the National Hospital for Nervous Diseases, and Kings College Hospital in London.

In 1965, the Harris P. Mosher Award was won by **Dr. Brian F. McCabe,** professor and head of otolaryngology at the U. of I.

Dr. Sylwester Jakubowski, a Polish orthopedic surgeon, completed a six-month fellowship at the U. of I. College of Medicine on March 2. He is chief of orthopedic surgery at the National Institute of Rheumatology, Warsaw, a 450-bed facility devoted exclusively to treatment of and research on arthritis and rheumatism. It has 16 smaller treatment units throughout the country—an area twice the size of Iowa having a population of 32,000,000. Dr. Jakubowski reports that the incidence of arthritis and rheumatism is about the same in Poland as in the United States, and that the surgical treatment of arthritis there is quite similar to the surgery done here. "We have found that early surgical treatment prevents deformity in many instances and halts the disease," he reported. "About one-third of the cases seen in Poland require surgery."

While at the U. of I. he completed a research project on the radiographic demonstration of tendons, with a grant from the Iowa chapter of the Arthritis and Rheumatism Foundation. Working with him were **Dr. Adrian Flatt,** a professor of orthopedic surgery, **Dr. Harry D. Wassel,** a fellow in hand surgery, and **Dr. Steven Cornell,** an associate professor of radiology. He will continue the clinical phase of his study after returning to Poland, and his report will be published in both English and Polish.

Dr. John Lanning, a Charles City internist, was the guest speaker at the February 13 meeting of the Fayette County Medical Society, in West Union. His topic was potassium metabolism.

Dr. J. R. Utne, a Mason City radiologist, has reported to the Kinney-Lindstrom Foundation, which made a $16,000 grant to Mercy Hospital, Mason City, two years ago for the equipping of a radio-



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isotope laboratory there, that 390 procedures have been performed thus far with the magnascanner which is the principal instrument in the laboratory. The other piece of apparatus is a twinprobe, which is used in I^{131} uptake studies of the thyroid.

Dr. Kenneth Lemon, an obstetrician and gynecologist, and **Dr. Loren Allaman,** a psychiatrist, both of whom practice in Oskaloosa, were the physicians among nine speakers at a three-day Ministers' Conference at Vennard College, near Oskaloosa.

The March 9 issue of the IOWA CITY PRESS CITIZEN contained an account of an interesting interview with **Dr. Ian Maclean Smith,** a professor of internal medicine at the U. of I. Dr. Smith predicted that in the not too distant future there will be biochemical tests for a seriously ill patient that will promptly identify his most affected organs and the critical disturbances that are taking place within the cells of those organs. Then therapy based on those findings will replace missing or deficient chemicals and correct other factors in the metabolism and other intracellular conditions.

His own research, during the past 12 years, has principally concerned infections and the use of antibiotics in combatting them. Those agents usually are life-saving, but sometimes metabolism or other functions have been fatally disturbed by the time the infecting organism is eliminated or inactivated. Animal experiments suggest, he said, that there may be a last supreme effort that the human organism makes at regaining normality—one that physicians might render successful. In studies with mice that have been given staphylococcal infections and then treated with antibiotics, the administration of glucose has increased life expectancy 20 per cent, and steroids have increased it 4 per cent. The most striking success was achieved with hypobaric oxygen—an almost 100 per cent increase in life expectancy.

"All of us, mice and men," Dr. Smith philosophized, "are endowed at conception with a certain capacity for living—an inherited store of biochemical energy. This store is diminished in our daily lives as we carry out routine activities, and by every physical insult and emotional stress we encounter. Our supply of energy is limited, and it cannot be replenished indefinitely. But death probably comes too early for many of us—perhaps for most of us."

Dr. Joseph D. Brown and **Dr. Samuel F. Brunk,** both associate professors of internal medicine at the U. of I. College of Medicine, have been elected to fellowship and associate membership, respectively, in the American College of Physicians. The organization admits only board internists, and associate-member status is preliminary to that of fellow-

ship. **Dr. Lawrence F. Staples,** of Des Moines, and **Dr. James W. Rathe,** of Waverly, were elected to fellowships on that same occasion, and **Dr. Thomas D. Ghrist,** of Des Moines, was made an associate member.

Dr. Hans Zellweger, a professor of pediatrics at the U. of I. College of Medicine, lectured on "Inheritance and Medicine" to the premedical students at Grinnell College, on March 8.

THE COUNCIL BLUFFS NONPARIEL for February 18 contained a well illustrated account of the house that **Dr. and Mrs. Lloyd Smith** have completely remodelled and modernized there. Dr. Smith is an anesthesiologist.

Dr. Robert L. Todd, of Burlington, is one of 18 physicians in the state who will serve as faculty members in the cardiopulmonary resuscitation program of the Iowa Heart Association during the next two years. He will have a share, in the southeastern counties, in teaching proper techniques to other physicians, hospital employees, law officers, ambulance and rescue-unit personnel and firemen.

The guest speaker at the February 21 meeting of the Des Moines Medical Assistants was **Dr. Norman K. Rinderknecht,** a Des Moines obstetrician and gynecologist.

Formation of a fund at the University of Iowa in honor of **Dr. Leo B. Sedlacek,** a Cedar Rapids psychiatrist, was announced on February 11 during the second anniversary banquet of the University's treatment unit for alcoholics at Oakdale. Dr. Sedlacek has been active in the education and treatment facets of the problem. **Dr. Robert C. Hardin,** vice-president for medical affairs, said that the money will be used to help finance projects related to alcoholism, and will provide an annual award to an Iowan who has made a significant contribution to such work.

Dr. Frederick C. Blodi, professor and head of ophthalmology at the University of Iowa, presented a lecture on "Degeneration of the Retina" at Queens University, Kingston, Ontario, Canada, on Feb. 26.

Drs. Samuel J. Fomon and **Lloyd J. Filer, Jr.,** both professors of pediatrics at The University of Iowa, have contributed a chapter to the book AMINO ACID METABOLISM AND GENETIC VARIATION, which has been published by the McGraw-Hill Co. Their chapter, "Amino Acid Requirements for Normal Growth," describes research they con-

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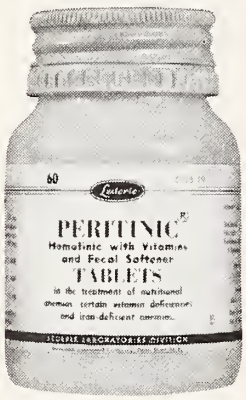
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ducted to determine the amount of essential amino acids required for normal infant growth during the early months of life.

Dr. Fomon participated in a national conference for the prevention of mental retardation through improved maternity care in Washington, D. C., March 27-29. He was a member of a panel which discussed "The Low Birthweight Infant."

Dr. Evan Peterson, of Burlington, who has served as Des Moines County medical examiner since 1963, submitted his resignation, effective April 1. He said his commitments at the Iowa Army Ammunition Plant precluded his continuing as medical examiner.

Dr. Ian Maclean Smith, a professor of internal medicine at the U. of I. College of Medicine has been elected a fellow of the Royal College of Physicians and Surgeons of Glasgow. Dr. Smith was born and reared in Glasgow, and took his medical degrees at Glasgow University in 1944. He was admitted to membership in the Royal College in 1947 after passing his Scottish board examinations in internal medicine.

The Royal College of Physicians and Surgeons of Glasgow is one of the oldest in Great Britain, having been founded in 1599 by Maister Peter Lowe, who at one time served as surgeon to King Henry IV of France. Dr. Lowe, a surgeon who prepared the first comprehensive test on surgery in English, received the original charter from King James VI of Scotland, who succeeded Queen Elizabeth I on the English throne in 1603. The charter granted to the Royal College of Glasgow authorized Dr. Lowe and a Dr. Robert Hamilton, "professoure of medicine," to examine all persons professing to be surgeons or physicians and "Gif they be found wordie, to admit, allow and approve thame." Dr. Smith joined the U. of I. faculty in 1955, and is chief of the Infectious Disease Division in Internal Medicine. He is currently president of the Iowa Thoracic Society, the medical section of the Iowa Tuberculosis and Health Association.

Dr. John S. Chapman represented the Dubuque County Medical Society, and **Dr. George Heine,** the chief of staff, represented Allen Memorial Hospital, Waterloo, on a panel that discussed accreditation at a meeting of the Third District Iowa Hospital Association at Mercy Medical Center, Dubuque, on March 14.

At the annual meeting of the Sioux Valley Eye, Ear, Nose and Throat Academy, March 15 at the Sheraton-Warrior Motor Inn, Sioux City, the guest speakers were two physicians from the U. of Minnesota Medical School. **Dr. Michael M. Paparella,** head of otolaryngology, spoke on middle-ear surgery and on lesions of the external auditory canal, and **Dr. Robert Letson,** of the Department of Oph-

thalmology, discussed superior oblique surgical problems. Several films were shown: "Horizontal Surgical System," "Geriatric Auditory Rehabilitation," and "Surgical Management of Recurrent Pterygia." **Dr. James E. Reeder, Jr.** and **Dr. Verne R. Heimann,** both of Sioux City, are respectively the vice-president and the secretary-treasurer of the four-state organization.

A program honoring **Dr. E. C. Wagner** will be held at the high school auditorium in Plainfield on the evening of April 5. He has practiced in the community since 1945, and is having to retire because of poor health.

Dr. Charles Edward Hamm, of Kingsley, has been elected to membership in the American Academy of General Practice.

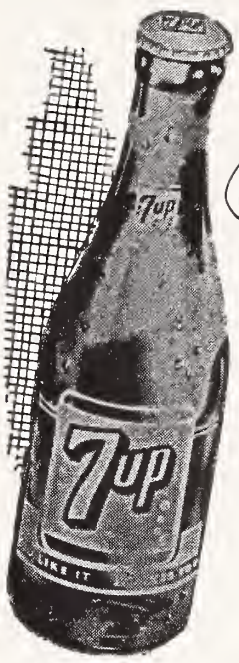
On March 15 **Dr. Robert Porter,** a Des Moines general practitioner, left for a two-month tour of duty in a provincial hospital in Vietnam with the AMA Volunteer Physicians program. His son, **Robert Porter, III, M.D.,** is with the U. S. Air Force in Pleiku, and the two men hope to have a reunion while the elder Dr. Porter is there.

Dr. Elmer M. Smith, of Des Moines, left for Da Nang, South Vietnam, on February 29, to serve as a medical advisor for a project of the U.S. Agency for International Development. It was at Da Nang that he served, for two months last year, with the AMA Volunteer Physicians program.

On March 21, from 8:30-9:30 p.m. over KDPS-TV, the Des Moines Public Schools station, the subjects for the Medical Forum of the Air were the Regional Medical Programs (heart disease-cancer-stroke) and the health-facilities planning councils. The physician participants were **Dr. Arthur H. Downing,** a Des Moines ophthalmologist and a member of the Medical Advisory Committee to the Central Iowa Health Planning Council, and **Dr. William D. de Gravelles,** a Des Moines physiatrist and chairman of the Out-of-Hospital Services for Heart, Stroke, Cancer and Related Disease Patients.

A month earlier, the topic for the program was athletic injuries, and **Dr. Richard Hammer,** a Des Moines pediatrician, was the panel moderator. Questions were so numerous that the telephones were disconnected about three-fourths of the way through the discussion.

The Iowa Heart Association presented a program over KDPS-TV on March 7 regarding heart research at the U. of I. College of Medicine. The discussion centered upon arteriography, and the participants were **Drs. Donald K. Warkentin** and **J. Michael Kioshos,** and **Mr. Allyn Mark,** a re-



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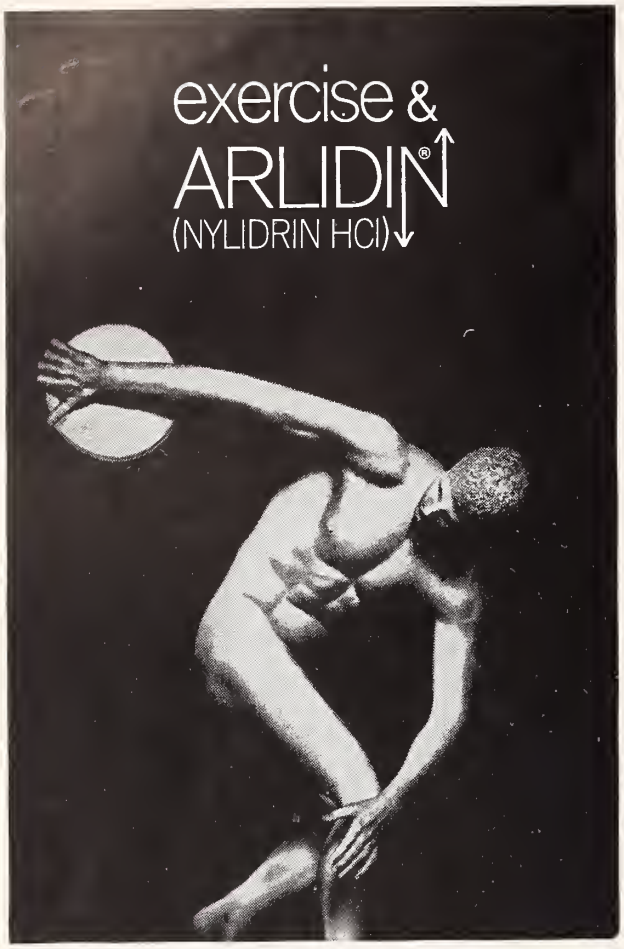
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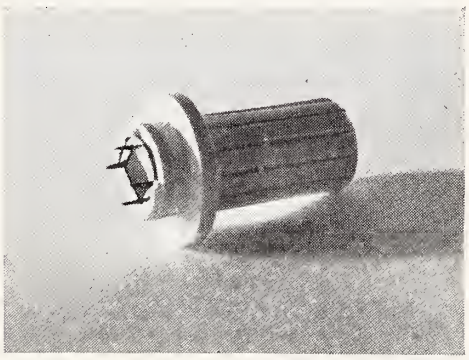
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search fellow. It was the fifth in a series of seven programs presented at 8:30 p.m. on the first Thursday of the month. **Dr. Walter Eidbo** is the coordinator.

At the March 20 meeting of the Des Moines Chapter of the Iowa Association of Medical Assistants, **Dr. John Uchiyama,** a Des Moines general practitioner, spoke on "The Psychology of Death."

A Des Moines internist, **Dr. Edward J. Hertko** spoke on heart disease, epilepsy and diabetes as they relate to individuals' eligibility for automobile insurance, at the March 12 meeting of the Iowa Property and Casualty Underwriters Association. The gathering took place at the Ankeny Golf and Country Club.

Deaths

Dr. Julius S. Weingart, 86, a retired Des Moines pathologist, died on March 1 at his home there. He took his M.D. degree in 1910 at Columbia University and interned at Bellevue and St. Luke's Hospitals, New York City. He began the practice of internal medicine and pathology in Des Moines in 1914, served as pathologist at Mercy, Methodist and Broadlawns Hospitals at various times, in addition to serving out-of-town institutions. From 1937 until his retirement in 1963 he was director of the pathology department at Iowa Lutheran Hospital. He was a Life Member of the Iowa Medical Society.

Dr. John F. Veltman, 73, a former Winterset physician, died on December 17, 1967, at Iowa Methodist Hospital, Des Moines. He was a medical graduate of Northwestern University, and served Winterest for 31 years. Eleven years ago he joined the staff of the Veterans Administration Hospital in Nashville, and after five years transferred to a similar institution in Knoxville, Tennessee. He had been a patient at Iowa Methodist intermittently since October.

Dr. Oswald C. Hardwig, 60, who practiced surgery at the Rohlf Memorial Clinic, in Waverly, from 1937 to 1964, died of heart disease in Walnut Creek, California, in December, 1967. He moved there immediately after closing his Iowa practice, and had had two or more previous heart attacks.

Dr. John Philip Cogley, 68, a Council Bluffs physician and surgeon, died on March 13 at his home, following an apparent heart attack. He was a graduate, and subsequently a faculty member, of the Creighton University Medical School, and he helped found the Cogley Clinic, at Council Bluffs, in 1927.

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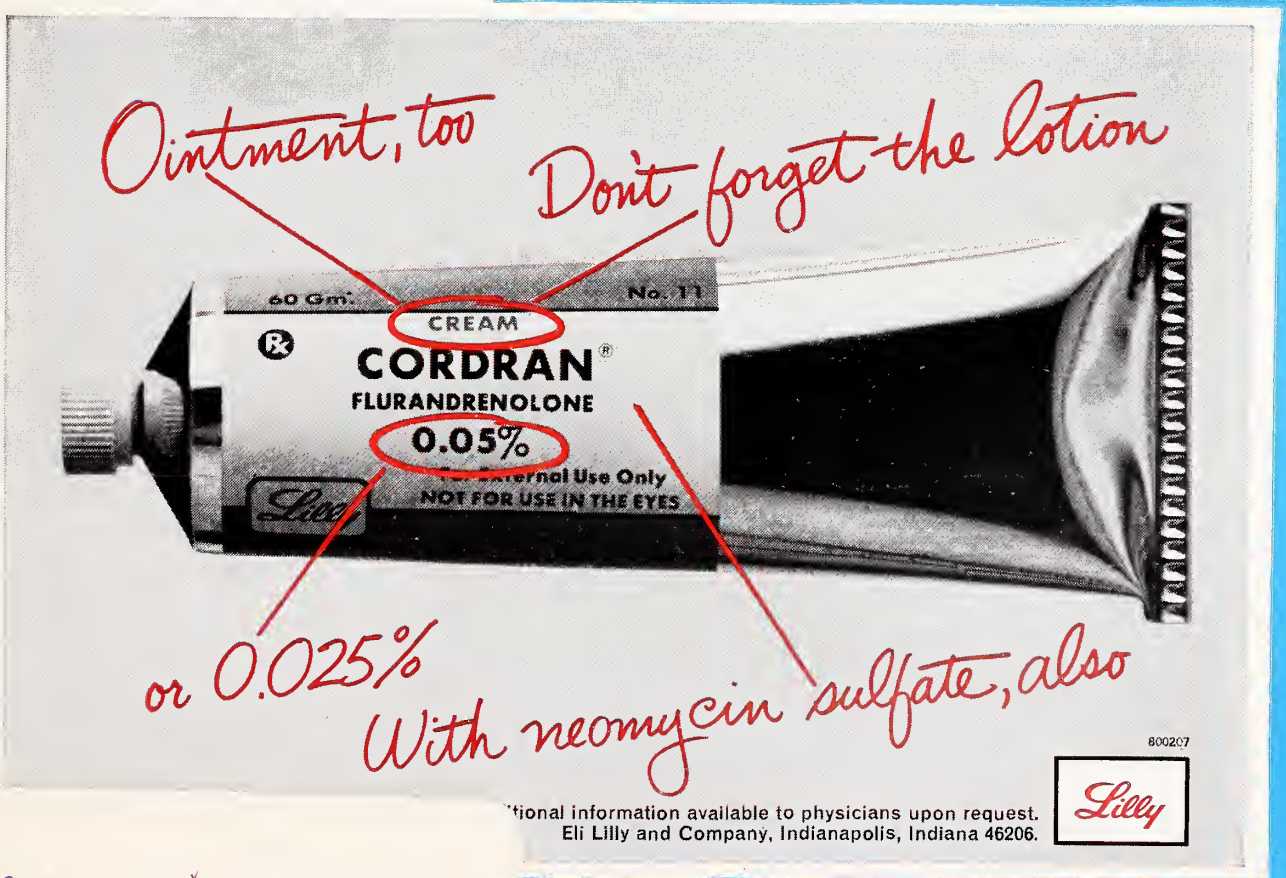
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- Influence of Government—C. Joseph Stetler, President, Pharmaceutical Manufacturers Assn.
- Human Cytogenetics II—Hans Zellweger, M.D., Iowa City
- Headaches Which Merit Neurologic Investigation—Maurice W. Van Allen, M.D., Iowa City
- Gastrointestinal Hemorrhage Secondary to Stress Ulcers—L. J. Dunn, M.D., Richmond, Va.
- Treatment of Functional Disorders: A Comparative Study—Emerson K. Wirtz, M.D., West Des Moines
- U. of I. Clinical Pathologic Conference—Obstructive Jaundice in a Child—Lee Forrest Hill, M.D., Des Moines



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Vol. LVIII May, 1968 No. 5

CONTENTS

Influence of Government
C. Joseph Stetler, Washington, D. C. 465

SCIENTIFIC ARTICLES

Human Cytogenetics II
Hans Zellweger, M.D., Iowa City 471

Headaches Which Merit Neurologic Investigation
Maurice W. Van Allen, M.D., Iowa City . . . 480

Gastrointestinal Hemorrhage Secondary to Stress Ulcers
Leo J. Dunn, M.D., Richmond, Virginia . . . 483

Treatment of Functional Disorders: A Comparative Study
Emerson K. Wirtz, M.D., West Des Moines . . 487

University of Iowa College of Medicine
Clinical Pathologic Conference No. 495 (Obstructive Jaundice in a Child) 492

EDITORIALS

Practical Politics, Lesson No. 1 503

A Bill of Rights for Grandparents 503

Surgery in Coronary Artery Disease 504

The Doman-Delacato Method 507

The Generation Gap 509

SPECIAL DEPARTMENTS

Coming Meetings 451

The Month in Washington 455

President's Page 502

In Memoriam: Morris Bandy, 1924-1968 . . . 510

University Hospitals Drug Letter (Ringer's Lactate Solution) 511

Journal Book Shelf 513

Iowa Association of Medical Assistants 514

State Department of Health 515

Woman's Auxiliary 518

In the Public Interest facing page 522

Doctor's Business 523

Personals 527

Deaths 550

MISCELLANEOUS

Medicine and Religion 454

Mass Immunization in Crawford County . . . 457

Anti-clotting Drug May Help Prevent Atherosclerosis 470

Benefit Honoring Dr. W. D. Paul 512

Denver Developmental Screening Test 524

U of I Study Supports Genetic Theory of Schizophrenia 550

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COMING MEETINGS

IN STATE

May 1-2 **Sixth Annual Workmen's Compensation Symposium,** Hotel Savery, Des Moines.

May 2 **Regional Seminar, Iowa Chapter AAGP and Crawford County Medical Society,** Country Club, Denison.

May 3-4 **Postgraduate Course on Cleft Palate, University of Iowa College of Medicine,** Iowa City.

May 21-22 **Postgraduate Course in Surgery, University of Iowa College of Medicine,** Iowa City.

May 22 **Regional Mental Health Seminar. Iowa Chapter AAGP and U of I Department of Psychiatry,** Psychopathic Hospital, Iowa City.

June 10-14 **Basic Principles in Internal Medicine, American College of Physicians and University of Iowa College of Medicine,** Iowa City.

June 17-19 **Iowa Chapter, American Association of General Practitioners, Spring Postgraduate Conference,** New Inn, Okoboji.

CONTINENTAL U. S.

May 1-3 **Symposium on "Virologic Approaehes to Cutaneous Diseases" sponsored by New York University School of Medicine,** New York.

May 2-4 **American College of Clinical Pharmacology and Chemotherapy, Fifth Annual Mecting,** Claridge Hotel, Atlantic City.

May 2-4 **Redwood Regional Confcrence sponsored by North Coast Counties Medical Societies and University of Southern California School of Medicine,** Konocti Harbor Inn, Clear Lake, California.

May 2-5 **Texas Medical Association,** Shamrock Hilton, Houston.

May 3-4 **Symposium on Clinical Aspects of Pulmonary Circulation,** Plaza Inn, Kansas City, Missouri.

May 4-5 **Sacramento Valley Counties—A Centennial Symposium sponsored by Sacramento Valley Counties Medical Societies and University of California, Davis,** El Dorado Hotel, Sacramento.

May 5-8 **American Society of Maxillofacial Surgeons,** Philadelphia.

May 5-9 **New York State Academy of General Practice,** Concord Hotel, Kiameska Lake, New York.

May 5-10 **American Society for Microbiology,** Sheraton-Cadillac-Statler Hotel, Detroit.

May 6-9 **Aerospace Medical Association,** Americana, Miami Beach.

May 6-9 **American College of Obstetricians and Gynecologists,** Palmer House, Chicago.

May 7-8 **Association of American Physicians,** Haddon Hall, Atlantic City.

May 8-10 **American Association of Genitourinary Surgeons,** Ponte Vedra Club, Ponte Vedra, Florida.

May 8-12 **Florida Medical Association,** Diplomat, Hollywood, Florida.

May 9-11 **Midwest Anesthesiology Conference,** Palmer House, Chicago.

May 10-11 **San Joaquin Valley Counties, Regional Postgraduate Institute sponsored by San Joaquin Valley Counties Medical Societies and Stanford University School of Medicine,** Ahwahnee Hotel, Yosemite.

May 10-12 **American Academy of Psychoanalysis, Annual Meeting,** Somerset Hotel, Boston.

May 12-15 **Frontiers in Gastroenterology, University of Pennsylvania School of Medicine,** Bellevue Stratford Hotel, Philadelphia.

May 12-15 **Minnesota State Medical Association,** Kahler Hotel, Rochester.

May 13-16 **Pesticides and Public Health Course sponsored by National Communicable Disease Center,** Atlanta, Georgia.

May 13-16 **American Urological Association,** Fontainebleau Hotel, Miami Beach.

May 13-16 **Mississippi State Medical Association,** Heidelberg Hotel, Jackson.

May 13-17 **State Medical Society of Wisconsin,** Sheraton-Schroeder Hotel, Milwaukee.

May 15-18 **Neurosurgical Society of America,** Mark Hopkins Hotel, San Francisco.

May 15-18 **American Gastroenterological Association,** Bellevue-Stratford Hotel, Philadelphia.

May 15-20 **Second International Congress of Lymphology,** Fontainebleau Hotel, Miami Beach.

May 16-18 **Cardiovascular Symposium, Fourth Annual,** Saint Francis Hospital, Hartford, Conn.

May 16-18 **Surgery Short Course and Thirteenth Trauma Day,** University of Nebraska College of Medicine, Omaha.

May 18 **New York Cardiological Society,** Waldorf-Astoria Hotel, New York.

May 19-20 **First International Symposium on Dextrans,** Flagship Hotel, Galveston Island, Texas.

May 19-22 **Illinois State Medical Society,** Sherman House, Chicago.

May 19-23 **American Thoracic Society,** Rice Hotel, Houston.

May 20-24 **Prevention and Early Detection of Disease in Clinical Practice, University of Pennsylvania School of Medicine,** Philadelphia.

May 23 **Adventures in Nuclear Medicine,** University of Nebraska College of Medicine, Omaha.

May 23-25 **American Gynecological Society,** The Homestead, Hot Springs, Va.

May 27-29 **American Ophthalmological Society,** Homestead, Hot Springs, Va.

May 27-30 **Auscultation of the Heart, Hahnemann Medical College and Hospital,** Sheraton Hotel, Philadelphia.

May 30-31 **Nevada Academy of General Practice,** Riverside Hotel, Reno.

May 31 **Bobath Approach to the Treatment of Cerebral Palsy,** University of Nebraska College of Medicine, Omaha.

June 3-4 **Neuromuscular Diseases of Children with Special Emphasis on Management, Cook County Graduate School of Medicine,** Chicago.

June 5-8 **Alaska State Medical Association,** Anchorage-Westward Hotel, Anchorage.

June 10-13 **American Proctologic Society,** Denver Hilton, Denver.

June 10-14 **Postgraduate Course in Obstetrics and Gynecology,** University of Colorado School of Medicine, Denver.

June 13-16 **American Association of Neuropathologists,** Washington-Hilton, Washington, D. C.

June 13-17 **American College of Chest Physicians,** Hilton Hotel, San Francisco.

June 14-15 **American Rheumatism Association,** Olympic Hotel, Seattle.

June 15 **Congress on Medicine and Insurance co-sponsored by the Association of Life Insurance Medical Directors of America and the American Medical Association,** Fairmont Hotel, San Francisco.

June 15-16 **American Diabetes Association,** Sheraton-Plaza, San Francisco.

June 16 **American College of Lcgal Medicine, Professional—Clinical Meeting,** San Francisco Hilton Hotel, San Francisco.

June 16-20 **American College of Preventive Medicine,** San Francisco.

June 16-20 **American Medical Association,** Fairmont Hotel, San Francisco.

June 17-19 **Intcnsive Care Units,** University of Colorado Medical Center, Denver.

June 17-19 **American Neurological Association,** Washington-Hilton, Washington, D. C.

June 17-20 **Postgraduate Course in Obstetrics and Gynecology sponsored by University of Colorado School of Medicine,** Estes Park.

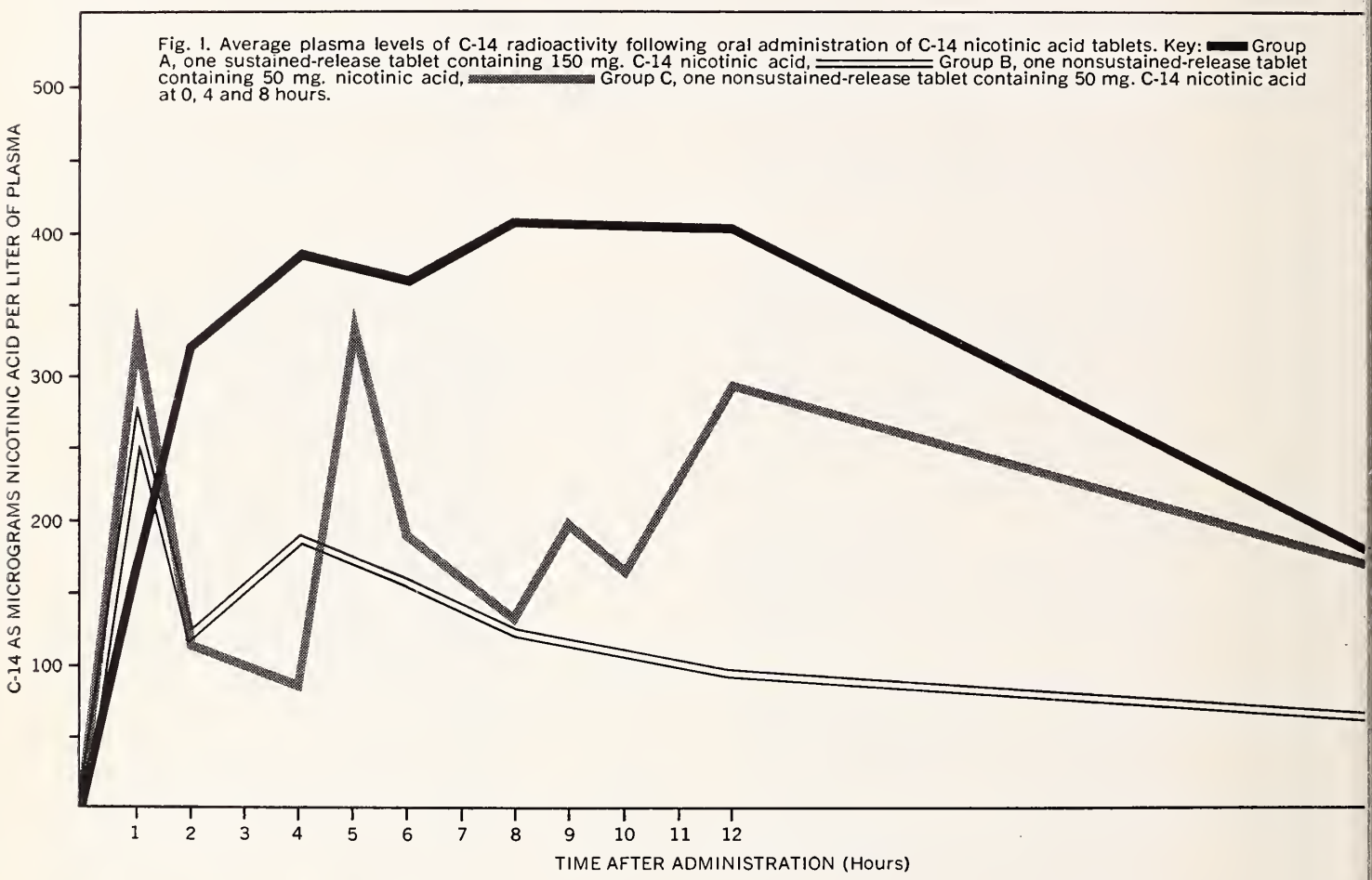
June 18-19 **American Medical Women's Association, Interim Meeting,** Waldorf-Astoria, New York.

June 19-21 **Infectious Diseasc: Mechanisms and Manifestations, University of Maryland School of Medicine,** Baltimore.

(Continued on page 454)

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Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.





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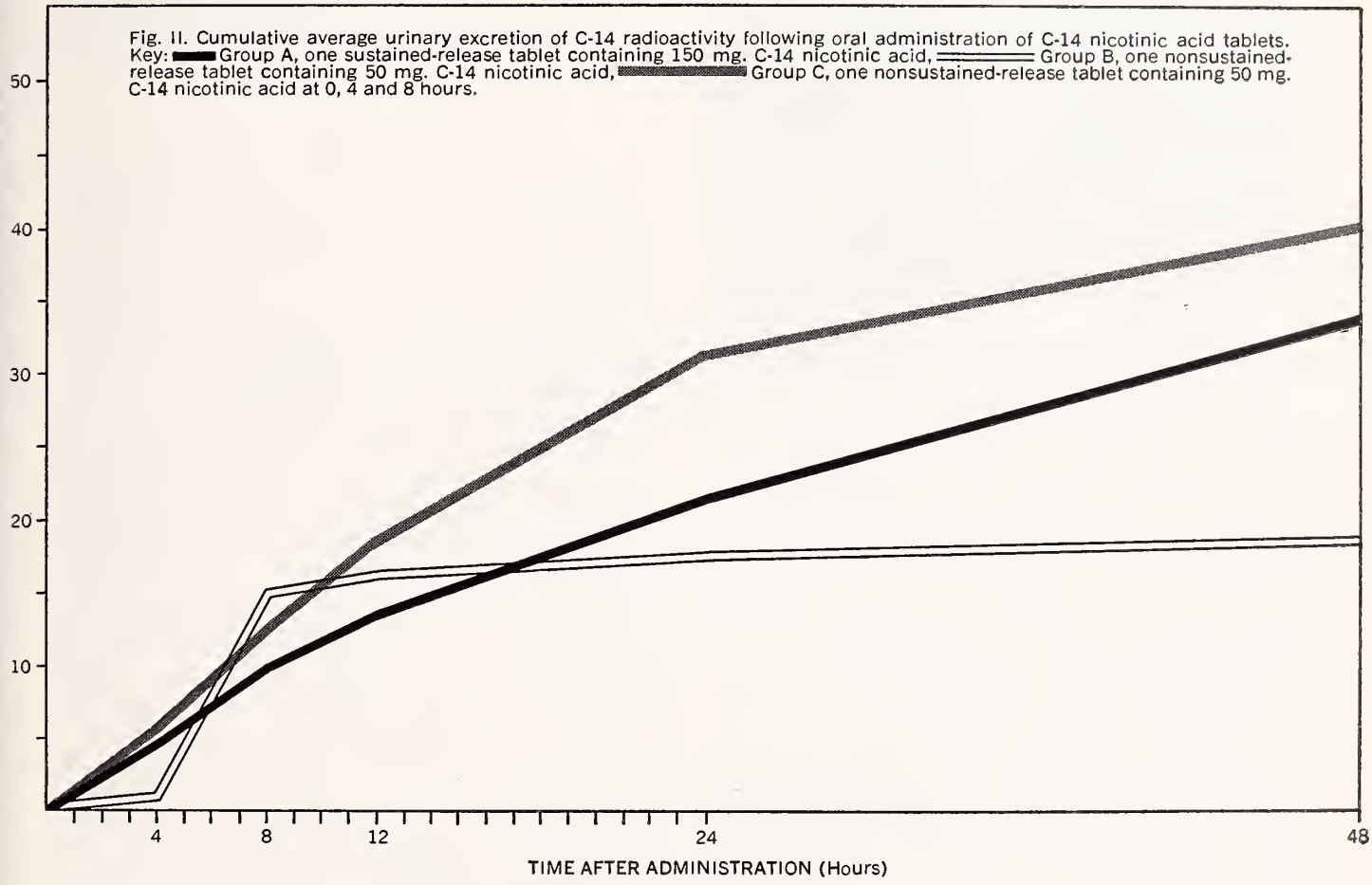


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ess confused and moody. Personal care, memory, motional stability, social attention improve. Fatigue, pathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will ermit your patients to enjoy the benefits of time-rolonged nicotinic acid/pentylenetetrazol therapy, t an economical price. Dosage is only one tablet every 2 hours.

Contraindications: There are no known contraindications.

Precautions: Exercise caution when treating patients with a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and Pharmaceutical Industries Corp.



When eating fads of teens or tots Lead to a sudden case of "trots"

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

In children, Parepectolin may be used to control diarrhea promptly and prevent dehydration, until etiology has been determined. In some cases, Parepectolin may be all the therapy necessary.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin (2½ grains) 162 mg.
Kaolin (specially purified) (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Children's Dose: One or two teaspoonfuls three times daily.

ROERER
WILLIAM H. RORER, INC.
Fort Washington, Pa.

COMING MEETINGS

(Continued from page 451)

June 26-28 **Children's Hospital Summer Clinics,** Vail, Colorado.

ABROAD

May 21-25 **Annual Meeting of the Hawaii Medical Association,** Honolulu.

June 8-12 **American Therapeutic Society,** Kahala Hilton, Honolulu.

June 26-29 **Sectional Meeting of American College of Surgeons,** Munich, Germany.

June 30-July 6 **Third International Seminar and Exhibition —Theme "World Problems in Rehabilitation of the Disabled,"** Hotel Metropole Conference Centre, Brighton, England.

Medicine and Religion

Rev. Russell C. Striffler, Iowa Methodist Hospital clinical chaplain, addressed the Johnson County Medical Society, in Iowa City March 6, on "Recent Developments in the Fields of Medicine and Religion." Mr. Striffler, a pioneer in the hospital clinical chaplaincy field, stated that more doctors today than ever before are realizing the correlation between medicine and religion.

"More and more physicians are admitting that man's body is affected by physical, spiritual, mental and sociological factors," he told the group. "The intensive study in recent years of psychosomatic medicine has brought to light vast areas in which the soma is affected by the psyche, and vice versa."

To illustrate his point, Chaplain Striffler used practices in Iowa Methodist Hospital as an example. "Every surgery patient, about 40 a day, is seen before surgery by a chaplain or a seminary student," he said. "Many times a patient will reveal fears or concerns that have not been shared with the attending physician—concerns that may have an effect on the surgery. Quite often surgery has been cancelled for this reason—until the anxieties are resolved."

He declared, "Medical men and ministers share responsibility for alleviation of suffering; realize that the 'personal' ought not to be squeezed out; combine technology and art; deal with alienation; and see the dangers of misuse of power given by the community." He added that with "the present day openness of religion to leave its ivory tower and get its hands dirty in real-life issues" and with medicine's new concern for the care of the total individual, mind as well as body, the two should "learn to know each other better and to live together."

Mr. Striffler directs a chaplain-internship program at Iowa Methodist Hospital. Young ministers who desire to become clinical chaplains may enroll for one year in the nationally accredited program conducted at the hospital. Six-week pastoral training sessions for young ministers have been held for a number of summers. This year, two such programs are scheduled, with one (now underway) a 12-week course. The internships and training courses are open to all qualified protestant pastors.



The Month in Washington

Washington, D. C.—The American Medical Association has stated that the regional medical programs had shown good progress in the early stages but urged that Congress order an early evaluation of them by a non-government agency.

The AMA position was outlined by Bland W. Cannon, M.D., of Memphis, a member of the AMA Council on Medical Education, in testimony before the House Subcommittee on Public Health and Welfare. The Subcommittee was considering Administration-sponsored legislation to extend the regional medical program law for five years.

The Subcommittee members reacted favorably to an AMA recommendation that the extension be limited to just three years. Some of the congressmen also indicated opposition to a recommendation by Michael DeBakey, M.D., of Houston, that appropriations for the regional medical programs be increased sharply.

"We view with favor the early progress of RMP, its ability to build on existing patterns of medical care (sometimes adding new features or changing old ones as local demands and resources make possible), and the local flexibility which allows the program to make a real contribution to the health care of our nation," Dr. Cannon said. "At the same time, we recognize that the concept of the regional medical program is still in a very early stage of its existence, and that it is difficult to appraise the program fully. We do not know, for example, how much this program adds to the stress on the already-overtaxed supply of available medical manpower.

"There is some concern that the proliferation of federal health programs substantially contributes to the rise in health-care costs. For this reason, we are pleased that H.R. 15758 provides for an evaluation of the program. We suggest, however, that the evaluation begin on July 1, 1968, rather than on July 1, 1969, since 'evaluation' should be an integral part of the planning. We also suggest that the Subcommittee consider further amending Section 102 to provide that the evaluation shall be made by a non-government agency. . . .

"We recommend that the Subcommittee delete the open-end authorization for funds for the four fiscal years ending June 30, 1969. In view of the fact that we still are dealing with a relatively untried program, we believe it would be wise to limit the authorization for such sums as this Subcommittee may determine to be reasonable, rather than to provide for 'such sums as may be necessary for the next four fiscal years.' "

Henry Brill, M.D., of Brentwood, New York, chairman of the AMA Committee on Alcoholism and Drug Dependence, said that the AMA supported the part of the legislation which would authorize federal grants for construction of facilities for a new program of alcoholic and narcotic addict rehabilitation. "However," he said, "we have long felt that funds for staffing and operation are properly the responsibility of the community, once the major burden of construction has been met with federal assistance."

* * *

The American Medical Association and the Association of American Medical Colleges announced a joint policy designed to increase the number of medical students.

The statement emphasized the urgent and critical need for more physicians if national expectations for health services are to be realized, and listed immediate and long-range steps that should be taken.

Immediate steps:

1. Increase the enrollment of existing medical schools.

2. Foster curricular innovations and other changes to shorten the time required for a medical education and to minimize the costs.

3. Meet the need for innovation in educational programs and encourage diversity in the character and objectives of medical schools. The development of quality schools designed primarily to prepare able physicians for clinical practice as economically and rapidly as possible should be encouraged.

"A longer-range approach to the need for physicians is the development of new medical schools," the statement said. "This approach will not solve our immediate, urgent need for more physicians, but it is essential for meeting the national needs of 1980 and beyond.

"To implement the measures enumerated above will require adequate financial support from governmental and various private sources for:

"1. Construction of facilities to expand enrollment of existing schools and to create new schools.

"2. Support of the operational costs of medical schools.

"3. Stimulation and incentive for educational innovation and improvement."

* * *

Wilbur J. Cohen, a key proponent of Medicare, was named by President Johnson to succeed John W. Gardner as Secretary of Health, Education and Welfare. Mr. Cohen, now 54, started with

the federal government in the early thirties and helped draft the Social Security program. Recognized by Congress as an expert on Social Security, he was the leading architect of Medicare and played a prominent role in getting Congressional approval of the program. He had been undersecretary of HEW since June, 1965. For the previous four years, he had been an assistant secretary of HEW.

At a news conference following his appointment to the top HEW post, Mr. Cohen foresaw healthcare's accounting for as much as 50 per cent of total welfare costs. He urged that voluntary private health insurance be improved, but he said that he did not believe private programs could be improved enough to permit the elimination of government help in the health care of low-income groups and the disabled.

"Medicare and Medicaid have had some impact on higher medical costs," Mr. Cohen said. "But I think doctors' costs are going to taper off. Hospital costs are going to continue to rise, but there is a problem of antiquated and inefficient methods. This can be changed."

Soon after Mr. Gardner's resignation became effective, Mr. Cohen announced major steps in the reorganization of HEW's health activities. Unified direction of HEW's major health agencies was assigned to Dr. Philip R. Lee, assistant secretary for health and scientific affairs. Dr. William H. Stewart, surgeon general of the Public Health Service, was named principal deputy to Dr. Lee.

Dr. Lee was given direct authority over the Public Health Service and the Food and Drug Administration. Dr. Stewart and Food and Drug Commissioner James L. Goddard, M.D., will report directly to the assistant secretary, while continuing to carry out their present administrative functions. Dr. Lee's responsibility was expanded to include over-all health policy direction and coordination of other health programs, including Medicare, Medicaid and the health activities of the Children's Bureau.

In his 1968 message of Congress, President Johnson had directed the HEW Secretary to submit "a modern plan of organization to achieve the most efficient and economical operation of the health programs of the federal government." "In the past four years," Mr. Cohen said, "31 major new laws have been enacted that increase the Department's authority, responsibility and appropriations in the field of health. The total federal investment in health has grown from approximately $3 billion in 1960 to nearly $14 billion in 1968, and $16 billion is proposed for 1969. Because of new programs like Medicare and Medicaid, the HEW health investment alone has more than tripled in the past three years, from $2.6 billion in 1966 to $9.6 billion this fiscal year, and $10.9 billion is proposed for 1969."



Vacation trip....

Motion sickness?



This time it'll be different. Emetrol taken before the trip begins will usually prevent nausea and vomiting. Emetrol is effective and safe...most helpful where safety is most important. It acts locally—not systemically.

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Emetrol®
phosphorated carbohydrate solution
emesis control

In a reassignment of agency responsibilities, the National Institutes of Health were expanded to include the present NIH, the Bureau of Health Manpower and the National Library of Medicine. The Health Services and Mental Health Administration were set up with responsibility for all other functions previously assigned to the Public Health Service. These two new agencies, along with the present Food and Drug Administration now make up an expanded and more comprehensive Public Health Service.

Dr. James A. Shannon, director of the National Institutes of Health, was named director of the newly constituted NIH. Dr. Robert Q. Marston, director of the Division of Regional Medical Programs, was named acting administrator of the Health Services and Mental Health Administration. Dr. Goddard continues as Commissioner of Food and Drugs. The heads of these three agencies will report directly to Dr. Lee under the new organizational setup.

Mass Immunization in Crawford County

Thanks to the Crawford County Medical Society, the residents of Crawford County were presented the opportunity to get their initial series of immunizations or bring their existing immunity up to date through a series of three clinics, recently. At monthly intervals, in six different locations, during January, February, and March, DPT (diphtheria-pertussis-tetanus), DT (diphtheria-tetanus), Trivalent Oral Polio, and Measles vaccine were offered to all residents of Crawford County, adults as well as children. The vaccine was given according to the specifications and recommendations of the Iowa State Department of Health and the American Academy of Pediatrics. The clinics, in the public schools during school hours, were conducted in Schleswig, Manilla, Westside, Denison, Dow City and Charter Oak to serve all areas of the county.

The clinics were initiated and organized under the supervision of the Medical Society with the cooperation of the public and parochial schools and the County Public Health Nursing Service. The doctors gave all of the injections, and they were assisted by volunteer members of the Crawford County Nurses Association. Other help at the clinics included volunteer mothers.

A total of 2,171 individuals took advantage of the opportunity and received 2,777 doses of vaccine during the three-month period. Many children were able to get their complete series of initial vaccinations, and a great number received the required "pre-school" boosters in preparation for kindergarten in the fall. Some adults received their first series of tetanus immunizations.

The Crawford County Medical Society last sponsored a similar series of clinics in 1965.





"When you're finished with baby,
maybe you can tell me what I can do about my extra pounds."

Get them while they're easily reversible.

Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.
Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Bamadex® Sequels®

Dextro-Amphetamine Sulfate (15 mg.) with Meprobamate (300 mg.) Sustained Release Capsules

Lederle

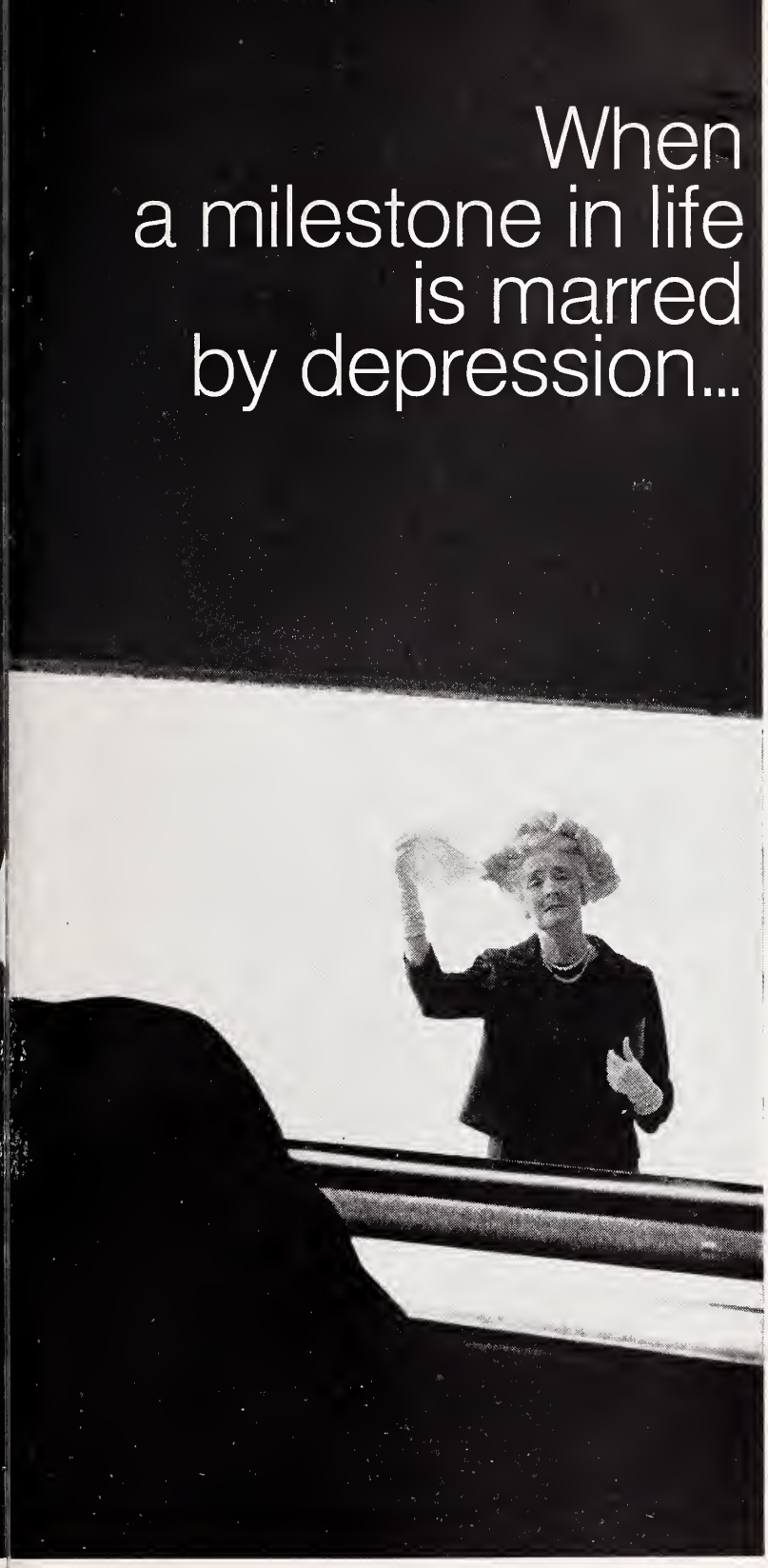
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Pearl River, New York

361-8



Indications: Tofrānil is recommended for the treatment of depressive states of diverse psychopathology.
Contraindications: The concomitant use of Tofrānil and monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or severe convulsive seizures may occur. Potentiation of adverse effects can be serious or even fatal. An interval of at least 7 days after M.A.O.I. therapy has been discontinued should be allowed before Tofrānil may be substituted. Initial Tofrānil dosage should be low, increases should be gradual, and the patient's progress should be carefully observed.
Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, Tofrānil should not be used during the first trimester of pregnancy.
Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment with Tofrānil. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy.
Because of its anticholinergic effect, caution should be observed in prescribing Tofrānil for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hype thyroid patients and in patients receiving thyroid medication when Tofrānil was added to the regimen.
Imipramine may block the pharmacologic activity of guanethidine an other related adrenergic neuron-blocking agents.
The drug is not recommended at th present time in patients under 12 y of age.
Adverse Reactions: Dryness of the mouth, tachycardia, constipation, d turbances of accommodation, swea ing, dizziness, weight gain, urinary frequency or retention, nausea and vomiting, peripheral neuritis, mild parkinson-like syndrome, tremors, rare cases of falling in elderly patients, confusional states (with such symptoms as hallucinations and dis orientation), activation of psychosis schizophrenics and agitation (inclu

When a milestone in life is marred by depression...



Often in the mind of the lonely, widowed, depression-prone individual, she's not gaining a daughter...she's losing a son. The occasion may be marred by depression with such symptoms as feelings of sadness, incapacity, helplessness and hopelessness.

Tofrānil often relieves symptoms of depression.

As maintenance therapy during the active phase of depression, it may help prevent relapse.

The use of Tofrānil in patients receiving M.A.O.I.'s is contraindicated.

In patients with cardiovascular disease, hyperthyroidism or increased intraocular pressure; or in those receiving anticholinergics (including antiparkinsonism agents), thyroid medication, or antihypertensive adrenergic neuron-blocking agents; and in those in their first trimester of pregnancy, the special precautions listed in the prescribing information should be carefully observed.

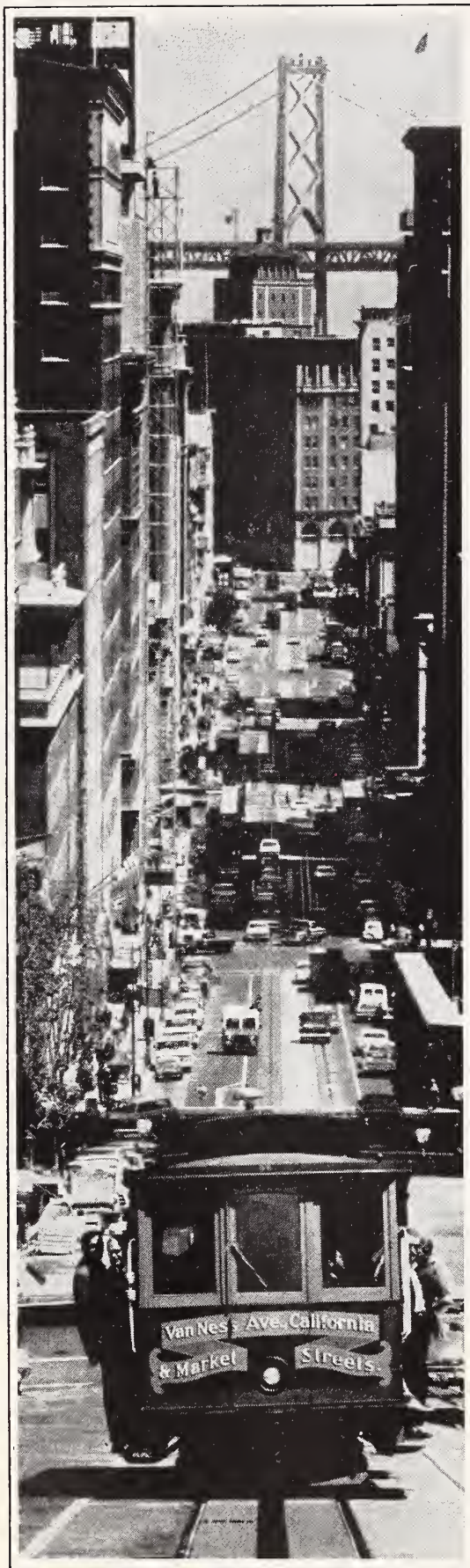
Toxic reactions severe enough to require discontinuation of Tofrānil are uncommon. However, for complete details, please refer to the full prescribing information.

Tofrānil® imipramine hydrochloride Geigy

ypomanic and manic episodes) h may require dosage reduction or addition of a tranquilizer or porary discontinuation of the drug, eptiform seizures, orthostatic otension and substantial blood sure fall in hypertensive patients, ura, transient jaundice, bone mar- depression including agranulocy- s, sensitization and skin rash uding photosensitization, eosino- a, and mild withdrawal symptoms udden discontinuation after pro- ed treatment with high doses. asional hormonal effects (im- nce, decreased libido, and estro- c effects) may be observed. pine-like effects may be more ounced (e.g. paralytic ileus) in eptible patients and in those g anticholinergic agents (includ- antiparkinsonism drugs).
patient Adult Dosage: Initially, g. daily, increased, if necessary, to 150 or 200 mg. Maintenance dosage may be lower, 50 to 150 mg. daily, if possible.
Geriatric and Adolescent Dosage: Initially, 30 or 40 mg. daily, which may be increased according to response and tolerance. It is usually unnecessary to exceed 100 mg. daily.
A lag in therapeutic response, lasting from a few days to a few weeks, should be expected. When dosage recommendations are already being followed, increasing the dosage does not normally shorten this latency period and may increase the incidence of adverse reactions.
Availability: Tofrānil: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration.
(B)46-850-C
For complete details, please refer to the full Prescribing Information.

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Reserve now for the Scientific Awards Dinner in honor of the Scientific Award Winners—Wednesday, June 19, 1968. Since space is limited, we suggest you make your reservations before June 3, 1968. Tickets are $10.00 each, payable in advance.

The complete scientific program, plus forms for advance registration and hotel accommodations, will be featured in JAMA, May 6, 1968.

SAN FRANCISCO, CALIFORNIA · JUNE 16-20, 1968

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ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains Methyclothiazide 5 mg. with Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains Pargyline Hydrochloride 25 mg. with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

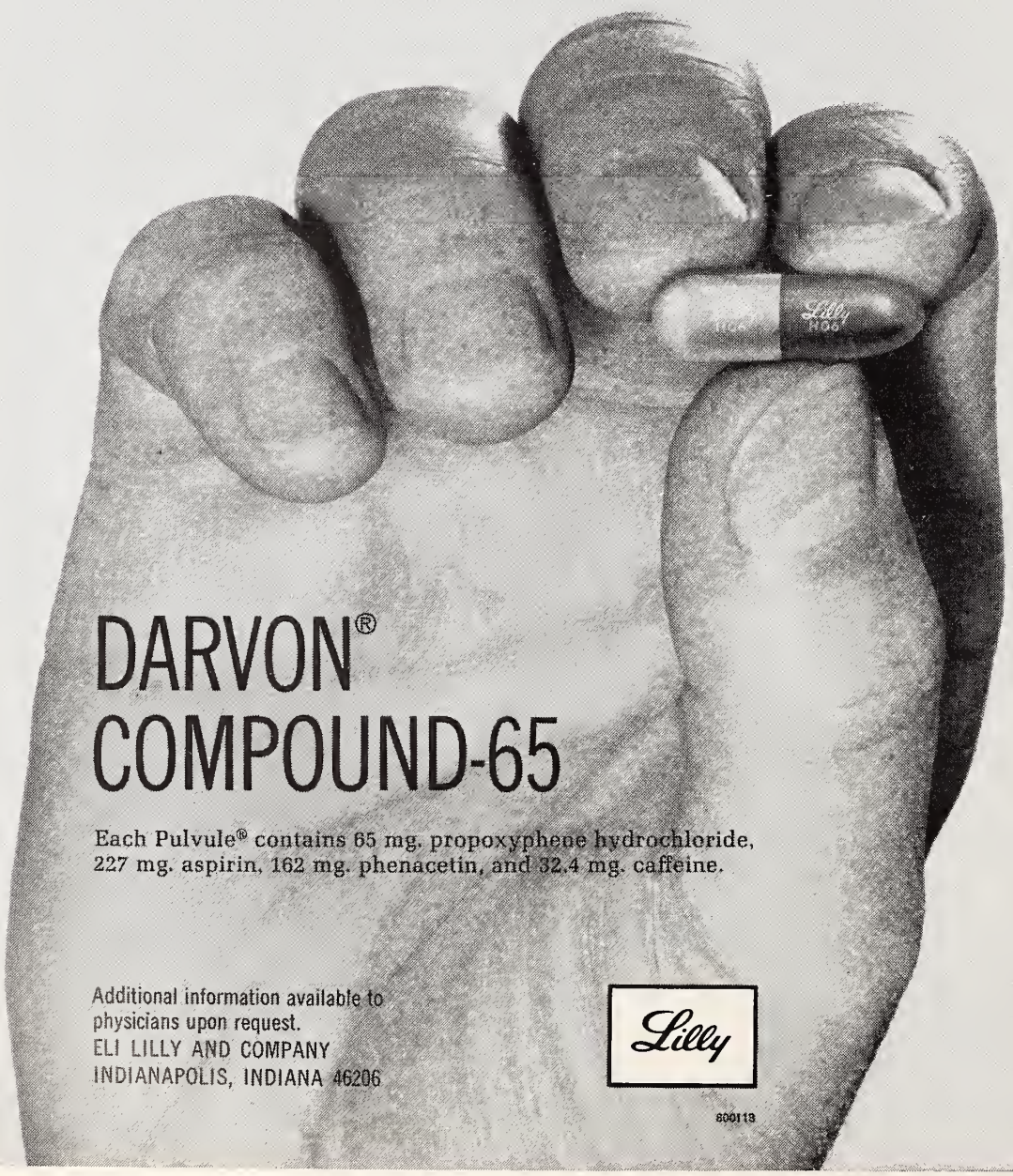
Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

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Influence of Government

C. JOSEPH STETLER
Washington, D. C.

My title, "Influence of Government" allows me to discuss a number of matters with which medicine and the pharmaceutical industry have had long and painful experience. Certainly, we in the pharmaceutical industry are experts on "influence" by government. We have had seven solid years of it, and the end is not in sight. With the possible exceptions of the securities business and the public utilities, I believe we are the most thoroughly "government influenced" industry in the country today.

We have just come through a bruising year which marked a determined attempt by some to apply new and far-reaching "influence" from Washington on our affairs. Thanks to some effective combined resistance and some responsible leadership in Congress, I am happy to say the effort came to naught, but as the British would say, "it was a near thing" for a while. The passage of certain proposed legislation would have had a profound effect on the practice of medicine, and the future strength and viability of the drug industry. Among other things, it could well have dampened the industry's future participation in medical conventions simply by eliminating any practical advantage to be gained from providing brand-name-oriented drug information to the profession.

Mr. Stetler, president of the Pharmaceutical Manufacturers Association, made these remarks as a part of his contribution to a panel discussion at a conference conducted by the American Association of Medical Society Executives, in New Orleans on January 4, 1968. An attorney, Mr. Stetler served for several years as head of the AMA Law Department.

PROPOSALS FOR GENERIC PRESCRIBING AND A NATIONAL FORMULARY

As you know, Senator Russell Long, of Louisiana, chairman of the Senate Finance Committee, and several other senators introduced a bill (S.2299) in the last session of Congress to establish a National Drug Formulary from which physicians would have been required to prescribe—and pharmacists to dispense—to enable beneficiaries of health programs under various titles of the Social Security Act to be reimbursed for drugs. The measure would have limited the range of medicines available to those drugs which a formulary committee deemed to be needed and likely to be prescribed. With a few exceptions, the drugs were to have been listed by generic name. A suppliers' price list would have been issued by the Department of Health, Education and Welfare, and federal reimbursement would have been based on a "reasonable cost range" of prices for generic drugs, plus fixed dispensing fees for pharmacists.

The effect of this totally unprecedented arrangement would have been to exclude from drugs available at government expense many products which have been used by practicing physicians for years. It would have wrongly assumed that drug products with the same generic name are therapeutically equivalent regardless of their sources. And it would have imposed federal price controls on drugs for patients under federally financed programs, favoring the generally less expensive generic products and relegating quality to secondary consideration.

The bill was carefully considered by the Senate Finance Committee and rejected. Instead, the Committee (and later the Congress) adopted an amendment offered by Senator Vance Hartke, of Indiana, providing for a com-

plete study of the bill by the Department of HEW. The Department is requested to report to Congress no later than January 1, 1969.

However, the legislative process was not quite that simple. When the Social Security legislation reached the floor of the Senate, Senator Long offered his bill again, as an amendment. By then it had a new number and had been changed in some minor respects, but it was still the same old formulary-generic prescribing package.

Notwithstanding the refusal of the Senate Finance Committee to approve substantially the same legislation, the full Senate adopted it after virtually no study and very limited discussion. The chamber also retained the Hartke Amendment, with the result that the "greatest deliberative body in the world" was in the anomalous position of ordering a study of proposed legislation and enacting it at the very same time. Aside from its novelty, this confused situation was significant in that it reflected the unseemly haste with which certain forces are striving to secure action on drug legislation—any drug legislation, so long as controls over prescribing and prices could be saddled on the medical profession and the drug industry.

Fortunately, the Conference Committee between the House and Senate deleted the Long Amendment and retained the Hartke Study Amendment, an action immediately approved by the House and the Senate.

THE NELSON HEARINGS

Supplementing this legislative assault on brand names, quality drugs and the prerogatives of physicians and pharmacists, has been a set of hearings conducted by Senator Gaylord Nelson, of Wisconsin, chairman of the Monopoly Subcommittee of the Senate Small Business Committee. Since their inception on May 15, 1967, those hearings have been designed to embarrass physicians and the drug industry, and to facilitate the passage of legislation such as S.2299, of which Senator Nelson is a cosponsor.

The basic theme of the hearings to date has been that all drugs with the same generic name, which meet USP standards, are chemically and therapeutically equivalent, regardless of their sources. Based on this false premise, it is Senator Nelson's contention that drugs should be prescribed and dispensed generically, with primary emphasis being given to price.

During the 1968 session of Congress, Senator Long will be back with his bill and Senator Nelson with his hearings, both seeking the destruction of brand names, manufacturers' identifications and the search for excellence which has made the U. S. drug industry the most effective and successful in the world.

I should ilke to note the obvious—that if the sponsors of such legislative actions are successful in grinding all drug manufacturing firms down to the lowest common denominator, there will be little point in manufacturers' continuing to strive for acceptance of their proudly identified products in the market place. With little to gain from recognition under such circumstances, why should manufacturers make the effort?

UNREASONABLE RULES FOR DRUG ADS AND EXHIBITS

Now let me turn to another governmental influence in the field we are considering—one which may be even more immediate and more real than the Long bill and Senator Nelson's show. I imagine all of you are aware that new and far-reaching controls over drug-industry advertising have been proposed by the Food and Drug Administration. Allowed to stand, they will have a profound impact on the delivery of all product information to physicians. The form and content of ads will be radically altered, adversely affecting their readability and thus reducing their value to physicians and the industry.

Although the proposed regulations are directed primarily at journal advertising, they are also aimed at exhibits which, as you know, are regarded by the Food and Drug Administration as a type of labeling, and therefore subject to "full disclosure" requirements.

If creativity in communicating with physicians is to be hobbled or smothered by government decree, if information for the medical profession is to be rendered verbose or hopelessly complicated, then neither the exhibit nor the advertisement can achieve its purpose, and other means will be sought for providing doctors with necessary and meaningful information about available products.

Up until now, government requirements relative to "full disclosure," as they have pertained to exhibits—i.e., adverse information, side effects, contraindications, warnings, etc., as well as information on effectiveness—have been met by having copies of the package insert or official brochure available at the booth for distribution. Now comes the FDA with a draft of regulations which would require a "brief summary" of side effects, contraindications and other adverse information on at least one panel of the exhibit. And any other panels would have to bear prominent references to the location, on the exhibit, of the summary of side effects. Further, the manufacturer would still be required to have copies of the package insert available at the booth for distribution.

No great knowledge of commercial art is a prerequisite to one's concluding that overburdening an exhibit with a vast amount of technical detail—detail which could easily be provided by other means—would make it virtually impossible to design a display which would be at one and the same time attractive, informative and capable of stirring the interest and curiosity of physicians. Drastic changes would have to be made in the form of exhibits, and there could not fail to be serious questions about their continuing effectiveness as communications vehicles.

The problem is magnified tremendously when one takes into account what the FDA means by the term "brief summary." For example, information relating to the effectiveness of a drug, in many circumstances, must be qualified immediately thereafter by information relative to limitations on its effectiveness. In addition, "brief summaries" must contain not only adverse information pertinent to the uses suggested by the exhibit, but also adverse information related to all *other* uses for which the displayed dosage form is commonly prescribed, *and* for all other uses recommended in any labeling or advertising.

I can sum up the regulatory requirements proposed for exhibits by stating that the FDA's overall requirement for each display is that it must present what is euphemistically termed a "fair balance" between claims for safety and effectiveness, and information relating to limitations on safety and effectiveness. This is an open-ended proviso infinite in the problems it would impose on exhibit sponsors and designers alike. It seems to assume that an ad or an exhibit regarding a prescription drug is the single—or at least a principal—source of knowledge about the drug that is available to the medical practitioner.

Traditionally, and in practice for a great many years, the primary purpose of an ad or an exhibit has been to awaken the doctor's interest in the product being promoted, to encourage his further inquiries about it, and to suggest that he prescribe it after he has satisfied himself through the many other avenues of inquiry open to him that it would be useful to him and his patient under specified conditions.

If these regulations are adopted, I believe there can be little question that manufacturers will be far less likely than at present to undertake the expense and the trouble of trying to devise exhibits that will serve their intended purposes and at the same time satisfy the FDA. Thus, another source of knowledge and information on new developments for physicians could dry up.

It is our view that exhibits should not be required to contain all the adverse information on the drug being promoted, as long as the package insert or other material containing full disclosure labeling is available at the exhibit, and if the exhibit or one of its panels also contains a prominent statement that such literature is available. Certainly any physician whose interest is stirred by an exhibit will pick up a package insert and read it before prescribing the drug.

Recognizing the crucial nature of this problem as it applies both to advertising and to labeling, the Pharmaceutical Manufacturers Association has filed extensive comments opposing the new FDA proposals. In addition, strong opposition has been expressed to the regulations by at least 18 PMA-member firms and by various advertising agencies and organizations, including the American Association of Advertising Agencies.

But we should be under no illusions. We face a long round of time-consuming, patience-testing negotiations before this controversy is resolved, and perhaps in the end another recourse to the courts if the FDA insists on re-

taining most of the basic concepts in its proposed regulations. The question here is vital to the industry and to the medical profession.

THE "UNRELATED INCOME" ISSUE

Closely paralleling this situation is the one created by the recently published regulations of the Internal Revenue Service which provide for the taxing of certain revenues of non-profit, tax-exempt organizations, including the American Medical Association and other medical societies. The action is based on an administrative decision of the IRS that so-called "unrelated income"—i.e., income from activities or enterprises unrelated to the organization's tax-exempt purpose, are subject to federal tax under a law which has been on the books for 17 years, but which has never before been interpreted in this fashion.

The main point that concerns us here is whether the ruling will be interpreted to mean that income from exhibits at professional meetings will also be taxable. The answer to this is locked up somewhere in the IRS bureaucracy at the moment, since to date it has not been made clear. But there can be no doubt that the regulations threaten severe consequences for a large number of medical associations, particularly the smaller ones, that depend on income they derive from exhibits at their meetings and from advertising in their publications to finance the services they render to their members, and indirectly to the public.

On June 1, 1967, Mr. Walter G. Arnold, Jr., exempt-organization coordinator in the Boston District Office of the IRS, addressed the National Association of Exposition Managers on the subject "Trade Shows and Expositions." In his prepared remarks Mr. Arnold said that "hospital-equipment shows and the like which are themselves proper business-league activities" would not be taxable. But in the discussion following his talk he was asked whether an association of language teachers which conducts meetings where book publishers exhibit would be similarly treated. He is said to have responded that such exhibits *as well as the exhibits of drug firms at medical conventions* would be considered "unrelated" and therefore taxable.

Mr. Arnold notwithstanding, the fact remains that the regulations are silent on the question of their application to income from medical conventions. Until this is spelled out, no sponsor can know where he stands as regards income from exhibits. Hence a major source of his financing remains in doubt.*

THE QUESTION IS HOW, NOT WHETHER, DRUG MAKERS SHOULD CONTINUE SUPPORTING POSTGRADUATE MEDICAL EDUCATION

In my remarks I have tried to sketch some significant recent history by way of demonstrating that there are indeed numerous government influences, bearing with increasing weight, on pharmaceutical manufacturers and the medical profession. In addition, I believe there are certain other problems of drug companies and medical societies relating to conventions and exhibits which deserve a brief comment. They boil down basically to the question of whether the traditional means of exchanging information between the doctor and the pharmaceutical industry at conventions are geared to present-day needs.

There are thoughtful people in our industry who feel that the familiar pattern of exhibits at medical conventions may be approaching its last days. They say that state and county meetings are not well attended, so that the exhibits are not visited. For that matter, even exhibits at large meetings are not uniformly regarded as effective. Certainly increasing government pressure on these forms of communication may well signal the arrival of the time for us to take a fresh look at our practices and to consider what changes may be necessary to make sure the vital informational job gets done in an effective, economical and mutually satisfactory manner.

Are conventions, in their traditional format, realizing their full potential in serving present-

* It now seems likely that Congress will forbid the IRS to tax "unrelated income" of tax-exempt organizations, and thus that medical societies' revenue from journal advertising and convention booth rentals is no longer seriously threatened. The Senate added an amendment to that effect, which had been introduced by Senator Murphy, of California, to a bill that initially had been intended to extend the excise taxes on telephone bills and automobile purchases. Because some others of the Senate's amendments to the measure would have the effect of increasing taxes—something that the House of Representatives regards as its sole prerogative —the legislation is certain to be altered considerably in conference committee. It is thought probable, however, that the Murphy amendment will survive and will be enacted into law.—Editors

day communication needs? Are exhibits in their familiar pattern still effective as a means of conveying industry information to members of the health team? Are there better ways—new departures—through which manufacturers and professional societies can achieve their objectives and at the same time make medical conventions more productive and more successful?

In the past year I have received a number of letters and telephone calls from industry representatives and medical society personnel asking these and other questions. There are a number who feel the programs at conventions are so full that they defeat the purpose of the exhibits. Physicians have no time—or practically none— in which to visit the exhibits. The mounting costs of space, construction and manning exhibits are further discouraging factors. All too frequently, of late, we hear about the practice of paying an amount to a medical society in lieu of renting an exhibit booth, the feeling being, obviously, that the exhibit is not worth the expense.

Lest there be any misunderstanding, I want to state categorically that the willingness of pharmaceutical houses to support medical publications and meetings has not been brought under question. Far from it. So long as these media have the kind of value to firms and physicians that they have had over the years, drug-company support of them is an obligation and a privilege the firms willingly shoulder. What is being questioned is the usefulness and appropriateness of the form which the industry's support is now taking, given the framework of current needs and limitations.

We are genuinely interested in working with the medical profession and with medical society executives in an effort to find answers to the questions which I have posed, and to go on from there, serving the profession and, indirectly, the public in the most productive ways we can devise.

May Courses at the University of Nebraska

The University of Nebraska Medical Center's Surgery Short Course and 13th Annual Trauma Day will be May 16, 17 and 18. The guest faculty will include Dr. Robert J. Baker, associate professor of surgery, University of Illinois College of Medicine; Dr. Charles R. Baxter, associate professor of surgery, Southwestern Medical School, Dallas, Texas; Dr. Roswell K. Brown, associate director, field program, American College of Surgeons, Committee on Trauma, New York; Dr. Edwin F. Cave, emeritus assistant clinical professor of orthopedic surgery, Harvard Medical School, Boston; Dr. Joseph K. Owen, acting chief, Emergency Health Service Branch, U. S. Public Health Service, Silver Spring, Maryland; and Dr. Alexander Walt, chairman of the department of surgery, Wayne State University School of Medicine, Detroit. Dr. Carl Sasse, an instructor, and Dr. Samuel Swenson, Jr., an associate professor of surgery at Nebraska, are coordinators of the course, and it carries 15 hours of Category I AAGP credit.

"Adventures in Nuclear Medicine" has been scheduled for May 23. Guest speakers will be Dr. Paul Numerof, director of the division of nuclear medicine, E. R. Squibb and Sons, Inc., East Brunswick, New Jersey; Col. Lawrence T. Odland, commander of the Air Force Radiological Health Laboratory at Wright-Patterson Air Force Base, Ohio; Dr. E. James Potchen, director of nuclear medicine at the Edward Mallinckrodt Institute of Radiology, St. Louis; and Dr. Arthur A. Sasahara, clinical associate in medicine, Harvard Medical School, Boston. Coordinator of this course is Dr. Merton A. Quaife, director of Nebraska's new division of nuclear medicine. The course offers six hours of Category I AAGP credit.

On May 31 there will be a workshop on the Bobath approach to the treatment of cerebral palsy. The famous Bobath team from London will conduct the sessions. Dr. Karel Bobath has published extensively on his many studies of the early diagnosis and treatment of cerebral palsy. He has lectured throughout the world on the neuro-physiologic approach to the problem of cerebral palsy. Dr. Bobath is a physician and is associated with the Western Cerebral Palsy Center in London. Mrs. Berta Bobath is a Fellow of the Chartered Society of Physiotherapy. Dr. Bobath is a member of the World Commission on Cerebral Palsy.

All of the above courses will be held in the auditorium of the Eppley Cancer Institute, 42nd and Dewey Streets, Omaha, Nebraska.

Further information may be obtained from the Continuing Education Department, University of Nebraska Medical Center, Omaha.

Anti-Clotting Drug May Help Prevent Atherosclerosis

A totally new experimental approach to the treatment of atherosclerosis—the use of an anticoagulant drug to reduce blood levels of cholesterol and other fats—was described on April 16 at a meeting of the Federation of American Societies for Experimental Biology in Atlantic City.

Anticoagulants have been used for some 30 years to control the blood clots that cause coronary, lung and other thromboembolic disorders. But the experiments reported in Atlantic City by Dr. N. Chandra Sekhar are apparently the first to show that an anticoagulant can also prevent the fatty accumulations in vessel walls that lead to atherosclerosis or hardening of the arteries.

Dr. Chandra Sekhar, a research scientist with The Upjohn Company, Kalamazoo, Michigan, has found that in cockerels (young chickens) with experimentally induced atherosclerosis, a potent anticoagulant, diaphenadione (Dipaxin, Upjohn), will reduce cholesterol, triglyceride and phospholipid levels by from 25 to 38 per cent. It is presently used by physicians in treating blood-clotting disorders.

Other frequently used anticoagulants had little or no effect on blood lipid or fat levels, Dr. Chandra Sekhar said. Diaphenadione also significantly lowered aortic cholesterol and promoted regression of formed atherosclerotic plaques in older pigeons with spontaneous atherosclerosis.

Diaphenadione, or more accurately, diphenylacetyl-indandione, has been marketed for the past 12 years. Dr. Chandra Sekhar emphasized that its use to lower blood-lipid levels is still experimental, and has been performed only in cockerels and pigeons.

It has been known for some time that fibrin, the clotting substance in the blood, collects on arterial walls and plays a role in atherosclerotic-plaque formation. But until Dr. Chandra Sekhar began his experiments there was no evidence "in the literature that anticoagulants will prevent the gradual narrowing of the vascular lumen in atherosclerotic disease."

To determine whether similar drugs possessed an anti-atherosclerotic effect, the investigator compared diaphenadione with four other anticoagulants, sodium warfarin, bis-hydroxycoumarin, phenindione and ethyl-bis-coumacetate. In comparative experiments, none of the other drugs had any effect, but diaphenadione effectively lowered serum and aortic cholesterols. A separate experiment compared it with the most potent of the other four anticoagulants, sodium warfarin, at doses that would produce the same anticoagulant effect. Again it significantly reduced serum cholesterol, triglycerides and phospholipids while the other anticoagulant had no statistically-significant effect.

Dr. Chandra Sekhar found that simultaneous administration of vitamin K_1, which is known to prevent blood clotting, partially blocked diaphenadione's anticoagulant properties, but preserved its ability to lower all three blood lipid levels. That was true in both experimentally-induced atherosclerosis and in the naturally-occurring disease in older pigeons. In the latter group, an eight-week course of treatment combining diaphenadione and vitamin K_1 significantly lowered the aortic cholesterol of the birds, and caused regression of their spontaneous plaques.

This work, although still in its experimental stages, "is indeed very significant and may have important clinical implications. An effective anticoagulant with demonstrated clinical effectiveness in thromboembolic disorders which combines the additional properties of lipid-lowering and plaque-regressing effects should be considered a most desirable therapeutic agent in the treatment of atherosclerotic disease," the East Indian concluded.

Occupational Health for Nurses

A full-time, five-day course in occupational health for registered professional nurses in industry will be offered beginning Monday, November 11, 1968 by the department of environmental medicine of New York University Medical Center, in co-operation with the American Association of Industrial Nurses. The course is limited to nurses with experience of five years or less in occupational health. The program will be under the direction of Dr. David H. Goldstein, professor of environmental medicine. Sara P. Wagner, R.N., will serve as coordinator for the nurse faculty.

This is the thirteenth consecutive year that the course (Course #484) has been given. Instruction will consist of lectures and conferences given by the combined medical and nursing faculties of the Medical Center. Subjects to be covered during the week include: the objectives and scope of an occupational health program, the relationship between doctor and nurse, employer and employee; management and the medical department are given as an introduction. Special emphasis is given to interviewing and counseling, and the role of the nurse in psychiatric problems. Environmental hazards, retirement and the problems of the older workers, legal aspects of medicine and nursing in an occupational health service, and legal aspects of workmen's compensation are covered.

Tuition will be $150.

Applications should be sent to the Office of the Recorder, New York University Post-Graduate Medical School, 550 First Avenue, New York, N. Y. 10016.



Human Cytogenetics II

HANS ZELLWEGER, M.D.
Iowa City

An exhibit of human cytogenetics, notably chromosomal aneuploidies in man, was published in the November, 1963, issue of this JOURNAL.[1] Since then, considerable progress has been made, and it is the purpose of this report to present, briefly, the newer developments in human cytogenetics, thus bringing the earlier report up to date.

DEFINITIONS

Euploidy—The normal chromosomal complement of 23 chromosomes (haploidy) or 23 pairs of chromosomes (diploidy). Gametes are haploid; all other cells (zygotes and somatic cells) are diploid.

Aneuploidy—Complement of any number of chromosomes other than 23 or 46.

*Hyperdiploidy**—46 + x chromosomes

*Hypodiploidy**—46 − x chromosomes

Triploidy—3 (23) = 69 chromosomes

Tetraploidy—4 (23) = 92 chromosomes

Polyploidy—(x + 2) (23) = 69, 92, 115, etc. chromosomes

Trisomy—2 (23) + 1 = 47 chromosomes (one chromosome being present three times instead of twice)

Tetrasomy—2 (23) + 2 = 48 chromosomes (one chromosome being present four times instead of twice)

Double trisomy—2 (23) + 1 + 1 = 48 chromosomes (two chromosomes each being present three times instead of twice)

Pentasomy—2 (23) + 3 = 49 chromosomes (one chromosome being present five times instead of twice)

Polysomy—2 (23) + x = 46 + x chromosomes (one chromosome being present x times instead of twice)

Monosomy—2 (22) + 1 = 45 chromosomes (one chromosome, a singleton, represented only once instead of twice)

Mosaicism—A state in which there are two or more cell populations, each having a different chromosomal complement.

ORIGIN OF ANEUPLOIDIES

The first meiosis or reduction-division reduces the diploid number of 46 chromosomes of ovogonia and spermatogonia to a haploid set of 23 chromosomes. In other words, meiosis establishes haploidy of the gametes (ova and sperms) by segregating the homologous chromosomes of each pair. If segregation of the two

Dr. Zellweger is a professor of pediatrics at the U. of I. College of Medicine. This study was supported in part by USPHS grant 5901NB05489-02. Part I appeared in the April, 1968, issue of this JOURNAL.

* A few hypodiploid cells and rare hyperdiploid cells can be found in otherwise normal preparations. They are merely a consequence of the technical processing of the cells, and are therefore insignificant. However the incidence of hyperdiploid and hypodiploid cells may be increased in certain pathologic conditions, notably in malignancies.

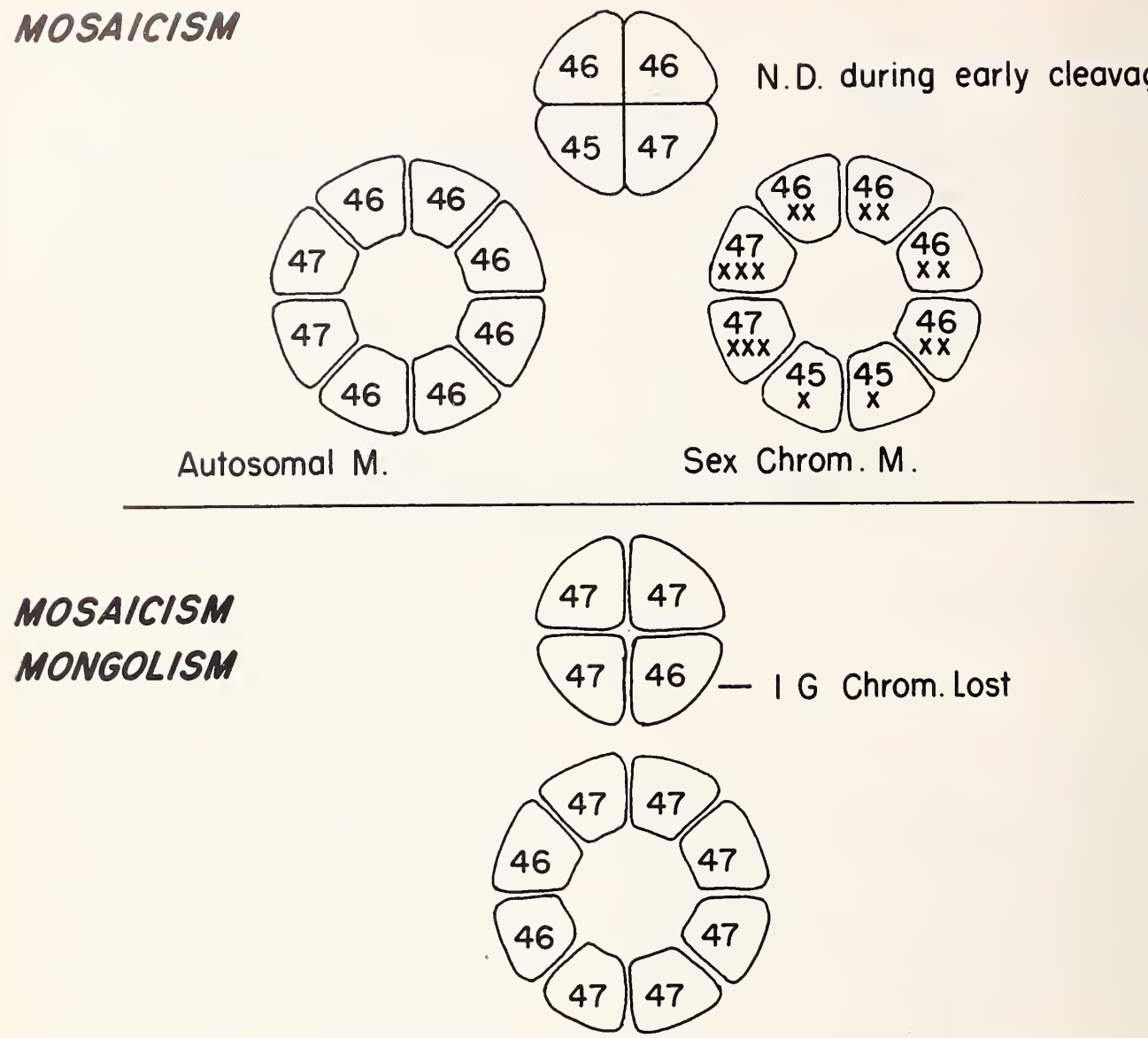


Figure 1. Origin of Mosaicism: (Top) Mosaicism due to chromatid nondisjunction during mitosis of a euploid cell. (Bottom) Mosaicism due to chromatid loss or lag during mitosis of a trisomic cell.

chromosomes of a chromosomal pair does not take place—an event called nondisjunction—gametes with 22 or 24 chromosomes result. Nondisjunction occurs much more often in ovogonia than in spermatogonia, and more often in the ovogonia of older females than in those of younger females. Fertilization of a gamete with 22 chromosomes by a euploid gamete (with 23 chromosomes) leads to a monosomic zygote with 45 chromosomes. Fertilization of a gamete with 24 chromosomes by a euploid gamete leads to a trisomic zygote with 47 chromosomes. The incidence of trisomies increases with the age of the mothers, and it is thus dependent on maternal age (cf. mongolism).[2]

Monosomy may also be caused by chromosomal loss or lag, one chromosome being lost during meiosis. Chromosomal loss or lag is not dependent on maternal age. Monosomy X, the only well established monosomy in man, does not increase in likelihood with increasing maternal age.

ORIGIN OF MOSAICISM (FIGURE 1)

Mosaicism is due to nonsegregation of chromatids during mitosis. If both chromatids of a given somatic chromosome migrate to the same daughter cell, aneuploid cell populations result. If, for instance, the chromatids of an X chromosome in an XX cell do not segregate, the individual in question will have a cell with one

X chromosome and another cell with three X chromosomes besides the euploid XX cells already present. Subsequent mitoses will lead to three cell populations, and in this case one would speak of an X/XX/XXX (45/46/47) mosaicism. If both chromatids of an autosomal chromosome migrate to the same daughter cell, a monosomic and a trisomic cell will again result. Since the monosomic cell is not viable, and since the trisomic cell will undergo further mitoses, the resulting mosaicism will have a euploid and a trisomic cell clone, and one would speak of a 46/47 mosaicism. Mitotic nondisjunction is rarer than meiotic nondisjunction; thus, mosaicism is rarer than trisomy. Autosomal mosaicism is rarer than sex-chromosomal mosaicism; the latter accounts for about one-fifth of all sex-chromosomal aberrations. Mosaicism with a Gm trisomic cell clone accounts for only one to two per cent of the cases of mongolism. A similar mosaicism, with a small Gm trisomic clone, is found in normal individuals; its exact incidence is unknown, but it is believed to be very small.

Meiotic and mitotic nondisjunction, and hence aneuploidies and mosaicisms, are usually sporadic events. Familial occurrence of trisomy and mosaicism is exceptional.[3] Balanced and unbalanced translocations are transmissible, and can occur as familial traits.[4]

AUTOSOMAL ANEUPLOIDIES

Certain aneuploidies are incompatible with postnatal life. Among them are monosomy YO, trisomies of larger autosomes (groups A, B and C), polyploidies, most autosomal tetrasomies, and all autosomal monosomies. Such autosomal aneuploidies and, quite frequently, XO sex-chromosomal monosomies as well, are found in abortions. It is estimated that aneuploidies account for approximately 25 per cent of all spontaneous abortions; that is to say, one zygote in 40 is aneuploid.* A few exceptional cases of autosomal monosomy G have been reported.[5]

Autosomal aneuploidies compatible with postnatal life are trisomy 21 (Gm) or Down's syndrome (mongolism); trisomy E (18 or 16-18) or Edward's syndrome; trisomy D (13-15) or Patau's syndrome; and, rarely, trisomy F (19-20) and nonmongoloid trisomy G.[6]

* One in 10 pregnancies ends in spontaneous abortion.

Mental retardation is a constant feature of autosomal aneuploidy, and failure to thrive is a frequent finding. Life expectancy is often short. Persons affected with trisomy Gm (mongolism) often have a shortened life span, and individuals affected with trisomy D′ or E rarely survive the second year of life.

Mongolism or Down's Anomaly. The overall incidence of this aneuploidy is one in 600 live births. It is lower (one in more than 2,000) for newborns of mothers under 25 years of age, and higher (one in less than 100) for newborns of mothers over 40.

As mentioned above, the life expectancy of mongoloids is often short. Only one in three Gm trisomic zygotes reaches the end of gestation; and only one in two liveborn mongoloids survives the fifth year of life.

There are many anomalies associated with mongolism. One in four mongoloids has a congenital heart disease (cushion defect, ventricular-septum defect or patent ductus arteriosus); one in 50 has duodenal atresia or stenosis. Anal and esophageal atresia occur more often in mongoloids than in nonmongoloids, and the incidence of cleft lip and/or palate is 1.4 per cent in mongoloids versus 0.14 per cent in nonmongoloids. Senile alterations appear early in the life of a mongoloid.

Essentially, there are three karyotypic anomalies which cause mongolism: trisomy Gm, partial trisomy Gm, and mosaicism with a Gm trisomic clone. Trisomy Gm accounts for approximately 95 per cent of all cases of mongolism; partial trisomy Gm, also called translocation or interchange mongolism, is found in 3-4 per cent of the cases; and mosaicism accounts for 1-2 per cent of the cases. There are no phenotypic differences between these three karyotypic anomalies.

Partial Trisomy Gm (Interchange or translocation Mongolism). Mongoloids with partial trisomy Gm (translocation mongoloids) have 45 regular chromosomes and an interchange structure with major parts of a D or G chromosome fused with an extra G (Gm) chromosome. Very rarely, the extra Gm chromosome is fused with a chromosome of a group other than D or G.

Fifty per cent of D/Gm (15/21) translocations and 90 per cent of G/Gm (21/21, 21/22)

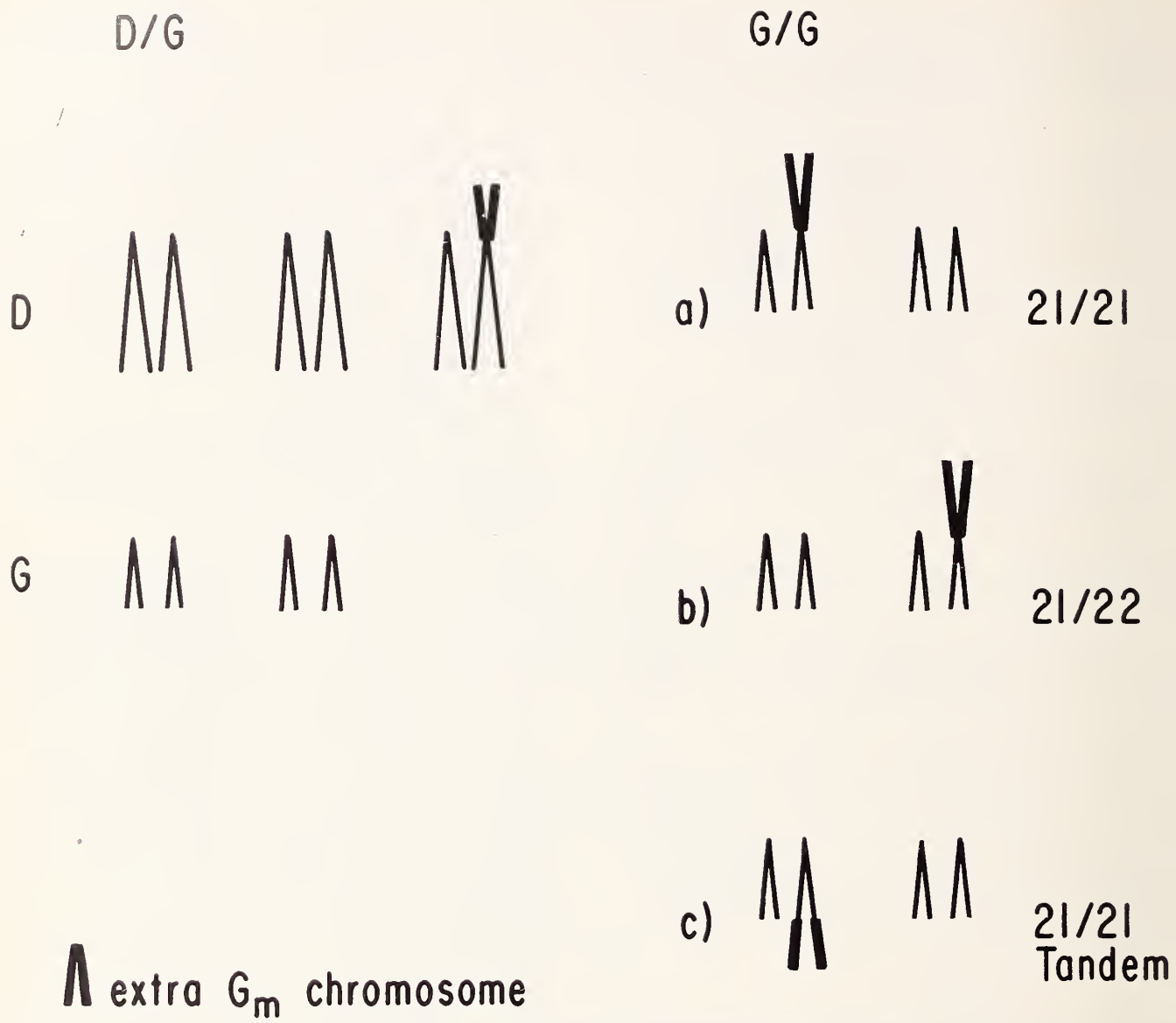


Figure 2. Schematic representation of karyotypes in translocation mongolism.

translocations are sporadic (chromosomal mutations). The other translocation mongoloids have a parent with the same translocation, but in balanced form. If the mother carries a balanced 15/21 or 21/22 translocation, the risk of her having a mongoloid child is 20 per cent. The risk is less than 20 per cent if the father carries such a translocation. If either parent carries a balanced 21/21 translocation, all of the carrier's living children will be mongoloid.

Families have been described in which D/G or G/G translocations were transmitted through several generations.[6] Although multiple cases of mongolism may occur in such families, familial translocation is not the only cause of familial mongolism. Familial occurrence of trisomy Gm is, in our experience, more frequent than familial D/G and G/G translocation, although its incidence still is small in comparison with the incidence of sporadic trisomy 21.

Mosaic Mongolism (Figure 1). Mosaicism with a large Gm trisomic cell population results in a mongolism which generally is phenotypically indistinguishable from trisomy Gm or translocation mongolism. Individuals with a small Gm trisomic cell population may be phenotypically normal. Phenotypes intermediate between true mongolism and normality are exceedingly rare. Phenotypically normal individuals with a small Gm trisomic cell population have an increased risk of having mongoloid children.

Partial Deletion of an Extra G Chromosome.

Very few cases of partial deletion of an extra G chromosome have been reported. They present some mongoloid features, but they lack the phenotype typical of trisomy Gm. Most of these cases are either minimally retarded or of low-normal intelligence.[7]

Double Trisomic Mosaicism. Again, very few cases have been reported in which there is a Gm trisomic and an 18 trisomic clone. If the Gm trisomic cell clone is large, mongoloid symptoms prevail; conversely, if the 18 trisomic clone is large, mongoloid symptoms prevail; conversely, if the 18 trisomic clone predominates, signs of trisomy 18 occur. Life expectancy is short, particularly in the latter case.[8]

Double Trisomy. Individuals with 48 chromosomes, including a trisomy Gm and another autosomal trisomy, especially trisomy 18, are exceedingly rare and, if they reach the end of gestation, have a very short life expectancy.[9]

The combination of trisomy Gm and a sex-chromosomal trisomy is encountered more often than the double trisomy described above, and persons having such a chromosomal complement do not have a severely shortened life expectancy.

Trisomy 18 or Trisomy E (Edward's Syndrome). This syndrome occurs in one of 3,000 live births. Life expectancy is severely shortened, most patients dying in infancy or early childhood. Mosaics with a normal or an 18 trisomic cell population may survive longer. The symptomatology of this syndrome is described in Table 1.

Trisomy D′ or Trisomy 13-15 (Patau's Syndrome). This chromosomal aberration has an incidence of one in 5,000 live births. As in trisomy 18, life expectancy is quite short, most patients dying in infancy although mosaics may survive somewhat longer. The symptomatology is described in Table 1.

The symptomatology and course of trisomies D′ and E overlap to a considerable extent, although some symptoms are most frequent in one or the other of the two. Some common features also can be found between trisomy Gm and these two autosomal trisomies; however one important difference is that multiple malformations are characteristic of trisomies D′ and E, whereas more than one severe malformation is rare in trisomy Gm.

Nonmongoloid Trisomy G and Trisomy F. Individuals with a supernumerary G chromosome but without clinical evidence of mongolism have been described. The origin of the supernumerary chromosome is not fully clear; it may represent either an extra G chromosome or a fragment of a large chromosome. Clinically these cases are characterized by severe mental retardation, muscular hypotonia, cryptorchidism in males, and the inconsistent presence of a few mongoloid stigmata. Cataracts and deafness have also been found.

A special form of nonmongoloid trisomy G, marked by moderate mental retardation, iris

TABLE 1

COURSE AND SYMPTOMATOLOGY OF TRISOMY E AND TRISOMY D'

Course and Symptomatology	Trisomy E	Trisomy D'
Prenatal and postnatal growth failure	+++	+++
Delay in psychomotor development	+++	+++
Microcephaly	+	
Holoprosencephaly	+	
Muscular hypertonia	++	
Muscular hypotonia		++
Prominent occiput	++	
Malformation of eye	(+)	+++
Glaucoma, corneal opacities, cataract, intraocular cartilage, retinal dysplasia		
Capillary hemangiomas on face	(+)	++
Malformed and deep-seated ears	+++	+++
Cleft lip and/or palate	+	+++
Micrognathia	+	++
Congenital heart lesion	+++	++
Ventricular, atrial septal defect, patent ductus arteriosus, etc.		
Short sternum	++	
Diaphragmatic hernia	++	
Heterotopia of pancreatic tissue	++	+
Meckel's diverticulum	++	
Accessory spleen		++
Malrotation of intestines		++
Renal anomalies	+++	+++
Aplasia, ectopia, duplication, horseshoe kidneys		
Hydronephrosis, polycystic kidneys		+++
Cryptorchidism	++	++
Prominent clitoris, small labia	+	
Bicornuate uterus		++
Single umbilical artery		+
Polydactyly, syndactyly		++
Flexion contraction of fingers	++	
Short hallux—phocomelia	+	
Rockerbottom feet	++	
Pes calcaneus		+

TABLE 2

X CHROMOSOMES AND SEX CHROMATIN BODIES

Sex Chromosomal Complement	No. of Sex Chromatin Bodies	External Phenotype	
		Male	Female
XY	0	Normal male	
XO	0		Turner's syndrome
XY	0		Testicular feminization
XYY	0	YY syndrome	
XX	1		Normal female
XX or Xx (short arm deletion)	1		Turner's syndrome
XX long arm isochromosome			
XXY	1	Klinefelter's syndrome	
XXYY	1	Klinefelter's syndrome with mental retardation plus YY syndrome	
XXYYY	1	See XXYY	
XXX	2		XXX syndrome
XXXY	2	Klinefelter's syndrome with mental retardation	
XXXYY	2	See XXYY	
XXXX	3		XXXX syndrome
XXXXY	3	Klinefelter's syndrome with mental retardation	
XXXXX	4		XXXXX syndrome

coloboma and anal atresia, has been reported from Switzerland and Italy.[10] In addition, a few cases with a supernumerary, small, metacentric F-like chromosome, characterized by severe mental retardation, muscular hypertonicity, low-set ears, small mouth and cryptorchidism in males, have been reported.[11]

Pathogenetic Considerations. The overlapping symptomatology of the various autosomal trisomies and, to a minor extent, of sex-chromosomal aneuploidies necessitates consideration of the pathogenesis of their phenotypic manifestations.

There is presumptive evidence that the phenotypes of chromosomal aneuploidies are not caused by individual mutant genes *per se*. It is quite possible that the supernumerary genes are normal (wild type) genes, not of themselves destined to produce pathologic manifestations. Rather it is their presence in triplicate —i.e., in abnormal numbers—which has the pathologic effect on the phenotype. The presence of an abnormal number of genes produces a severe genic imbalance involving a large part of the genome and not just the genes of the extra chromosomes. An extra chromosome 21, for instance, has a proved effect on the X chromosome, as evidenced by the increased levels of glucose-6-phosphate dehydrogenase in mongolism.

SEX-CHROMOSOMAL ANEUPLOIDIES

Nuclear Sex, Sex Chromatin, Barr Bodies. Nuclear sex can be determined in every somatic cell during the interphase or intermitotic metabolic phase of the cell. It is usually determined by buccal smear, and less frequently by vaginal smear or examination of peripheral white blood cells. The presence of a heterochromatic sex-chromatin body (Barr body) in the epithelial cells of the buccal mucosa, or a drumstick in the segmented granulocytic white blood cells, indicates a sex-chromatin positive state or female nuclear sex. The absence of such a body indicates a sex-chromatin negative state or male nuclear sex. As a rule, the number of X chromosomes can be determined by counting the Barr bodies in a cell

and adding one to the total. Thus, one Barr body indicates a sex chromosomal complement of two X chromosomes.

The presence or absence of Barr bodies gives no information about autosomes or the Y chromosome. An XX female and an XXY Klinefelter both show one Barr body, and are sex-chromatin positive; an XXX female and an XXXY Klinefelter both show two Barr bodies and likewise are sex-chromatin positive. Conversely, an XO Turner and an XY male both lack Barr bodies and are sex-chromatin negative.

Lyon Hypothesis. 1. One of the two X chromosomes in a normal female or an XXY Klinefelter, and all but one X chromosome in individuals with more than two X chromosomes are inactive in the interphase. In other words, they produce no messenger RNA, but do participate in mitosis like any other chromosome.

2. The inactivation, which takes place at about the tenth to fourteenth day of gestation, occurs at random—i.e., in some cells the X chromosome of paternal origin becomes inactive, whereas in other cells the X chromosome of maternal origin becomes inactive.

3. Normal females and all other individuals with two or more X chromosomes have one cell population in which the genes aligned on the paternal X chromosome function during interphase, and a second cell population in which the genes carried on the maternal X chromosome function. The distribution between the two cell clones varies from individual to individual. If a woman carries the mutant gene for one of the X-linked disorders such as Duchenne's muscular dystrophy, G6PD deficiency, agammaglobulinemia or hemophilia, and if the X chromosome carrying this gene is the more active, the woman may show signs of that disorder. An exception is that females heterozygous for the X-linked Xg^a blood group do not show two cell populations with respect to this trait.

Female Gonadal Dysgenesis (Turner's Syndrome). Female gonadal dysgenesis or Turner's syndrome due to X chromosomal anomalies is found in about 50 per cent of the patients who consult our obstetric-gynecologic clinic for primary amenorrhea. Half of our adult Turner patients are sex-chromatin positive; the others are sex-chromatin negative. Patients displaying the typical somatic manifestations of Turner's syndrome can be recognized (or, at least, suspected) in infancy and early childhood. In patients without the Turner phenotype, the syndrome will not be recognized until the primary amenorrhea becomes apparent. Three variants of Turner's syndrome and a short description of Bonnevie-Ullrich's syndrome will be given below.

TABLE 3

DIAGNOSIS: TURNER'S SYNDROME, PURE GONADAL DYSGENESIS, AND ULLRICH'S SYNDROME

	Turner's Syndrome	Pure Gonadal Dysgenesis	Ullrich's Syndrome
Streak ovaries	Present	Present	Absent
Somatic Turner anomalies	Present	Absent	Present*

* Sometimes associated with pulmonic stenosis

Monosomy X, Sex-Chromatin-Negative Turner's Syndrome. This form of Turner's syndrome occurs once in 3,000 female live births, and in one of fewer than 20 spontaneous abortions. The latter figure indicates the high fetal wastage of monosomy X.

The karyotype shows 45 chromosomes, with an XO sex-chromosomal complement.

Persons affected with the sex-chromatin-negative Turner's syndrome have edema of the extremities at birth, and that state may last for several months. They display coarse facial features, low-set ears, low hairline, short and webbed neck, shield chest, hypoplastic finger- and toenails, short metacarpals and metatarsals IV and V, and cubitus valgus. Coarctation of the aorta, pulmonic stenosis and, rarely, other congenital heart diseases are often found, as are renal anomalies. They are short of stature, the adults generally failing to exceed 150 cm. in height. Secondary sexual characteristics do not appear. There is primary amenorrhea, and although the external genitalia are those of a normal female, the uterus and Fallopian tubes are immature, and the gonads consist only of streaks of connective tissue without oogenesis. Adults affected with Turner's syndrome have increased urinary excretions of gonadotropins.

Girls with Turner's syndrome are of normal or near-normal intelligence, and generally are friendly and nonaggressive. They have defi-

cient space-form perception and orientation, developmental dysgnosia and dyspraxia.[12]

Sex-Chromatin-Positive Turner's Syndrome. The phenotypic manifestations of this syndrome are the same as those of monosomy X.

The karyotype shows 46 chromosomes with two X chromosomes. The second X chromosome may show a partially deleted short arm or a long-arm isochromosome. Various mosaicisms with one cell clone showing XO monosomy are found in about 20 per cent of all Turner's cases.

Pure Gonadal Dysgenesis, Sex-Chromatin Positive. Because somatic anomalies comparable to those of XO Turner's syndrome are not seen in this condition, it is often not recognized until the menarche fails to appear. Persons affected with this disorder are of normal stature, sometimes display eunuchoid features, have underdeveloped breasts, and have sparse pubic and axillary hair. Their external phenotype is female, with occasional hypoplasia of external and internal genitalia. As in monosomy X, the gonads consist only of streaks of connective tissue.

The karyotype shows 46 chromosomes with two X chromosomes. The second X chromosome may show a partially deleted long-arm or a short-arm isochromosome. Mosaicisms such as XO/XX, XO/XY/XYY, and XO/-XX/XXX sex-chromosomal complements have also been described.

Annex 1: Ullrich's or Bonnevie-Ullrich's Syndrome. This is a condition in which the somatic anomalies seen in XO Turner's syndrome are present, but in which internal and external female genitalia are normal and sexual maturation appears at the normal age. Mental subnormality, pulmonic stenosis or atrial septal defect are often found.

Annex 2: Male with Turner's Phenotype. Patients of this sort are males who have a normal sex-chromatin-negative male karyotype, but present the somatic anomalies seen in Turner's syndrome.

Three forms can be differentiated: (1) with anorchia; (2) with hypergonadotrophic hypogonadism and germinal aplasia; and (3) with normal sexual development (Ullrich's syndrome). Mental retardation and congenital heart disease are more frequently seen in males with Turner's phenotype than in female Turner's, and pulmonic stenosis is a frequent congenital heart lesion in these patients.[13, 14]

Klinefelter's Syndrome (Seminiferous Tubular Dysgenesis). About 20 per cent of all cases of Klinefelter's syndrome patients show chromosomal mosaicism with an XXY cell population.

XXY Klinefelter. The incidence of this form of Klinefelter's syndrome is one in 400 male live births. Persons affected with this disorder have a male phenotype with male hypogonadism. The testicles do not show active spermatogenesis, and hyalinized bodies are found in the seminiferous tubules. There is increased urinary excretion of gonadotropins. Stature is either normal or tall, and the proportions are eunuchoid. One in seven XXY patients is mentally subnormal, and sociopathic behavior is somewhat more frequent among such persons than in the karyotypically-normal population.

XXXY or XXXXY Klinefelter. These forms of Klinefelter's syndrome are rare. Both types of patient are mentally retarded, the XXXXY type being in general more severely retarded than the XXXY. Hypogenitalism is a constant finding, and cryptorchidism and hypoplasia of the scrotum are frequent. Radio-ulnar synostosis is associated with both types. Cleft palate is occasionally found in XXXXY Klinefelters.

YY Syndrome. The exact incidence of an XYY sex-chromosomal complement in the male population is not known. It can be found in otherwise normal males, but in some individuals it is associated with a variety of clinical signs and symptoms. The most frequent finding is excessive (over 180 cm.) height. Aggressive behavior and juvenile delinquency are rather frequent findings. Hypogenitalism is found in some cases.[15, 16]

Klinefelter's Syndrome in Combination with the YY Syndrome. Hypogenitalism, excessive height and mental retardation occur in patients with XXYY, XXXYY or XXYYY sex-chromosomal complements.

Polysomy X (XXX, XXXX, XXXXX). The incidence of trisomy X is presumably one in 600-800 female live births, and one in 250 females in institutions for the mentally retarded.

Many XXX females are phenotypically in-

distinguishable from normal XX females, although they have a higher frequency of sterility and mental subnormality. Mental retardation is even more pronounced in XXXX and XXXXX females. Aneuploidies occur somewhat more frequently in the offspring of XXX females than in karyotypically normal women.[3, 17]

XX/XY Mosaicism. This rare mosaicism is found in intersexes with external female or male phenotypes, and in true hermaphrodites. The causes are varied. In dizygotic twins of unlike sex, XX/XY mosaicism is due to mutual exchange of hematopoietic tissue. In singletons, it can arise if two sperms, one with an X and the other with a Y chromosome, fertilize (a) one ovum (dispermic conception); (b) one ovum and one polar body; or (c) two ova. In the latter two cases, fusion of the two zygotes occurs after fertilization. Finally, XX/XY mosaicism can arise if, during an early cleavage division of an XXY zygote, one cell loses its Y chromosome and the other cell loses one of its X chromosomes.[18]

SUMMARY

Recently acquired knowledge of autosomal and sex-chromosomal aneuploidies, including mosaicism and translocation trisomies, has been presented. The phenotypic consequences of chromosomal aneuploidy have been discussed.

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Headaches Which Merit Neurologic Investigation

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THE SEVERITY OF DISCOMFORT in the head is an imperfect guide to the seriousness of its cause. Some of the severest headaches one hears about are due to subarachnoid hemorrhage, migraine or emotional disorders, whereas relatively mild discomfort may be reported by patients with intracranial tumor. The quality of a chronic headache is also of limited value to the diagnostician in interpreting the meaning of this symptom. Sharp, shooting pain, throbbing pain, steady pain and dull aches are all rather nondescript.

The location of the pain may have some significance. Chronic unilateral or localized pain tends to indicate unilateral or focal disease. Such headaches often arise from the scalp, from excessive tension in the cervico-occipital musculature or from disorders of the cervical spine. Headaches caused by intracranial disease may be generalized or may be localized to any part of the head.

Much more important in the analysis of a headache are its time relationships, considered in a broad sense. Chronic long-standing headache as an isolated symptom is less alarming than a headache that constitutes a relatively new experience. Headache that is present soon after trauma and continues unabated for months is less serious than one that arises several weeks after trauma. A headache that is acute and perhaps severe, but lasts only hours, is less likely to be serious than one that lasts several days.

A headache that awakens the patient from sleep or is present immediately on awakening is of more serious import than one that begins while he is at work in the mid-morning and increases during the day. The age of the patient at the onset of the headache, its progress, duration, intermittency and diurnal variations, its time of onset in relation to other happenings and symptoms—all of these are features of the utmost value in the analysis of head discomfort.

Response to medication is also of value. The headache which is relieved more readily or completely by sedatives and alcohol than by analgesics tends to be based on anxiety and tension. Not infrequently the headache of a brain tumor or other intracerebral disease is relieved by aspirin or by modest doses of codeine. Very often the headache of nervous tension and anxiety is not so relieved. The headache of migraine may be so severe as to require narcotics, and so may the headache of meningitis and subarachnoid hemorrhage.

THE SIGNIFICANCE OF A HEADACHE MUST BE JUDGED BY THE COMPANY IT KEEPS

Some symptoms which may accompany headache suggest or demand further investigation. Among the earliest symptoms of brain disease of any kind is a loss of drive, energy and interest. The neurotic may have these same complaints, of course, and thus they are not especially helpful. However personality change, disturbances in recent memory and drowsiness are more easily recognized and described by others, and should be taken seriously. A common symptom of brain disease is some kind of convulsion—focal or general. A combination of convulsions and headache, es-

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pecially when either is of recent origin, demands investigation. Intracranial-mass lesions often result in visual complaints, blurring or diplopia, or partial loss of vision. A disturbed sense of balance is another common symptom, as is disordered motor function of the face or extremities, often manifested as hemiparesis. Aphasia indicates a focal lesion in the left hemisphere. Clearly, the greater the number of these symptoms, the greater the likelihood that an intracranial mass is the cause of the headache.

The classical association between headache and vomiting seems to need litle comment. Both symptoms are common, the former being so often psychogenic in origin and the latter so often gastrointestinal that the significance of the association can be missed. Especially is this true with posterior-fossa tumors, with which convulsions, mental changes and focal deficits are uncommon initially. One should always look closely for papilledema, nystagmus and ataxia in those patients.

Certain special circumstances are likely to cause difficulty in the diagnosis of headaches. One of these is old age. Common causes in that group of patients are cervical arthritis, hypertension and occlusive vascular disease. The role of the last-mentioned disorder as a cause for headache in such persons has been insufficiently emphasized. It is, however, difficult to attribute the headache to vascular disease unless other symptoms suggest cerebral ischemia. Dizziness, memory changes, transient dysphasia, diplopia and blurring of vision or transient hemiparesis indicate a serious compromise of circulation. Particularly important is the possibility of giant-cell arteritis—a less common but serious and treatable disease. This disorder occurs almost exclusively in patients over 50 years of age, and it frequently causes very severe unilateral headache. Finding hard and tender scalp arteries and low-grade fever in association with headaches of recent onset and high intensity should lead one to suspect this diagnosis strongly. If there seems little doubt about the local findings and if the sedimentation rate is elevated, then the patient should be started on steroids at once, for this condition is often associated with involvement of the vasculature of the eye, and can result in sudden and permanent blindness. The diagnosis is confirmed by biopsy of the artery—a procedure which, incidentally, may ameliorate the patient's pain.

Post-traumatic headaches are particularly troublesome. There seems to be almost an inverse relationship between the severity of trauma to the head and brain, and the severity and persistence of the headaches which follow the injury. Very often one hears the story of an injury to the head with no subsequent loss of consciousness or no more than transient unconsciousness. Headache is present immediately or when the patient awakens, and it continues severe and incapacitating—often until a legal settlement has been made. Those headaches which arise soon after injury are often associated with local pain and tenderness at the site of trauma, and seldom have serious significance. One should remember, however, that an associated injury to the neck, rather than the head injury *per se*, may be the cause of some of these headaches.

Fortunately, physicians generally are alert to the possibility of subdural hematoma. Chronic subdural hematoma usually does not begin producing symptoms until several weeks after head trauma. The headaches are often not severe, but are dull, variable from day to day, and lacking in special characteristics. When such headaches occur after trauma and are associated with any of the symptoms previously mentioned, and particularly when there is a personality change or drowsiness, one should be especially alert. Subdural hematoma is deceptive, for signs of increased pressure may not be evident clinically.

Probably the diagnosis of mild viral meningitis is made less frequently than its incidence warrants. Many patients with febrile illness, severe myalgias, pulmonary or gastrointestinal symptoms and severe headache will be found to have some meningitic response if the spinal fluid is examined. The fact that this may not be identified, as a consequence of a failure to do lumbar punctures in these patients, is probably not blameworthy, since specific treatment is unavailable. However, a much more serious possibility is the overlooking of bacterial meningitis when one is confronted with signs of severe illness due to infection, or when one

is faced with a problem of headache and fever of undetermined origin. Headache is common enough with sepsis alone so that one may not be put on guard. When one is confronted with unexplained fever in an infant or young child, or with fever and headache in an adult when the explanation is not obvious, he should not delay too long before doing a lumbar puncture. Especially should bacterial meningitis be considered when the patient with pneumonia or some other infection has severe headache and is drowsy or stuporous. Stiff neck is almost always present with meningeal infection, but it may be absent in infants and elderly individuals.

Another special condition which merits discussion is spontaneous subarachnoid hemorrhage. This condition is characterized by sudden headache which soon increases to a high intensity and is associated with vomiting and disturbance in consciousness. The diagnosis is confirmed by finding blood in the spinal fluid. This is the commonest type of "stroke" in young people, but it is seen in all other ages as well. The condition is rather easy to recognize. One can expect to find fever, severe headache, varying degrees of confusion or stupor, often hypertension, and usually but not always stiff neck. Often focal signs are not seen after the first such incident. Symptoms can be expected to last seven to 14 days after a single severe hemorrhage. Recurrences are common during that same period of time. The mortality is high, especially when there is a subsequent hemorrhage.

Much more deceptive and more likely to be overlooked is the less-severe subarachnoid hemorrhage. It is quite possible for a patient to have a precipitous headache accompanying a sudden small hemorrhage, but not to fall, vomit, become incapacitated or lose consciousness. That a patient may continue at his job despite having blood in his spinal fluid is not generally appreciated. Ambulatory patients may be suspected of subarachnoid hemorrhage when a sudden severe headache appears and lasts for four to seven days. One should look particularly for stiff neck and hemorrhages in the fundi. The next episode of bleeding may be one that causes major neurologic disability or death. Perhaps this one of the serious circumstances involving headache as a primary symptom is the one most likely to be overlooked by the physician. The correct diagnosis can be made only by lumbar puncture.

There are a number of general and systemic conditions that may be associated with chronic headaches. Recognizing them may obviate the necessity for special procedures. One of them is myxedema. Another, and the most important of them, is arterial hypertension. Emphysema or some other chronic pulmonary disease occasionally produces increased intracranial pressure by means of venous back-pressure and disturbances in gas exchange. Chronic carbon-monoxide poisoning is characterized by cephalgia. Hypercalcemia is also associated with pain in the head. Certain disturbances in ocular balance, especially a weakness of convergence, may result in headache. Cervical arthritis or neck injuries are often associated with head pain. Sinusitis, if acute, can produce severe headache, but most headaches that patients attribute to "sinus" are caused by something else.

THE NEUROLOGIC WORKUP IN PATIENTS WITH HEADACHE

What is the most efficient way to proceed with the neurologic investigation, when indicated, for headache? A standard workup, under such circumstances, should include the usual history, physical and neurologic examinations and ophthalmoscopy. One should keep in mind the general systemic disorders that may be associated with headache. Plain roentgenograms of the skull, with special attention to the possibility of erosions, calcifications or shift of the pineal constitute a basic and important diagnostic test. Roentgenograms of the chest are also indicated, as a means of searching for primary disease of the lung, or neoplasia, either primary or metastatic. Beyond that point, the decision must be made whether to utilize any or all of the special procedures available, or to observe the patient for a further period of time. The electroencephalogram may be helpful, particularly if it reveals a slow wave focus. A radioactive brain scan may be utilized. Lumbar puncture is often indicated, but it should be performed with caution, especially if there is papilledema. One should al-

ways measure the pressure in the manometer before removing any fluid, being certain that the patient is relaxed. A pressure of over 200 mm. H_2O with the patient in a horizontal position should be viewed with suspicion; a pressure of over 250 mm. H_2O is almost certain to mean increased intracranial pressure. The fluid should be examined for cells and protein content. Many brain diseases cause increases in spinal-fluid protein. Finally, special procedures such as cerebral angiography and pneumoencephalography may have to be considered in difficult situations.

When all of the studies short of the major radiographic procedures are negative, when the patient manifests no sign of neurologic dysfunction and when he has none of the ominous associated symptoms mentioned above, one is justified in observing him and treating him symptomatically. The chief obligation of the physician, then, is a standard one—namely, to observe the patient in the office, to note any change in his clinical state, and to check his neurologic status. Time, patience and careful reexamination can solve many difficult problems.

Gastrointestinal Hemorrhage Secondary to Stress Ulcers

LEO J. DUNN, M.D.
Richmond, Virginia

TWO RECENT ARTICLES have documented the occurrence of stress ulcers in the upper gastrointestinal tracts of acutely ill obstetric and gynecologic patients.[1, 2] The severity of this complication and the current concepts of its etiology and therapy have been outlined previously.[1]

The following is a report of three cases of stress ulcers complicating the course of seriously ill patients on the obstetric and gynecologic service at the U. of I. Hospitals. The patients were seen during a three-year period (1961-1964), and they are presented because of the unusual association of stress ulcers with eclamptic coma in one case, and with severe radiation injury in another. The third case was one of septic abortion.

When he prepared this report, Dr. Dunn was an associate professor of obstetrics and gynecology at the U. of I. College of Medicine. He is now chairman of the Department of Obstetrics and Gynecology at the Medical College of Virginia, in Richmond.

CASE REPORTS

Case 1. H. S., a 35-year-old, white, single female, was admitted to University Hospitals on June 9, 1961, with a septic abortion. Her latest monthly period had commenced on March 20, 1961, and a criminal abortion had been performed on her on June 3, 1961, by curettage and intrauterine instillations. Chills and fever began five days following that procedure, and on the following day she had been admitted with a temperature of 102°F. and shaking chills.

Physical examination at that time revealed a blood pressure of 120/76 mm. Hg, a pulse rate of 160/min., and a respiratory rate of 26/min. Physical findings showed evidence of a generalized peritonitis, a right parametritis, and a large and tender uterus. The patient's hemoglobin was 9.7 Gm. per cent, her white blood cell count was 11,100/cu. mm., with a shift to the left, her serum electrolytes were normal, and a urinalysis showed a specific gravity of 1.024 and an occasional granular cast.

Treatment consisted of penicillin, strepto-

mycin, Chloromycetin, nasogastric suction, and intravenous fluid and electrolyte replacement. The anemia was treated by means of two units of whole blood. There was a transient episode of jaundice during the first week of hospitalization, but it did not recur.

The patient showed little evidence of improvement, her temperature ranged from 101° to 104°F., and she had a persistent adynamic ileus. On her sixth hospital day she passed blood per rectum, and gastric aspiration revealed blood in her stomach. Thereafter she received nine units of whole blood, and it maintained her hemoglobin at 11 Gm. per cent. Recurrent intestinal bleeding occurred on July 2, with massive diarrhea and hematemesis, and it recurred on July 12, at which time intragastric hypothermia was begun because of hematemesis, and it was maintained for 24 hours.

On July 11, 1961, incision and drainage of bilateral subdiaphragmatic abscesses were performed. At that time, the splenic flexure was injured, but it was repaired and the area was drained. Material cultured from both abscess cavities was reported as showing Escherichia coli and another gram-negative rod that could not be identified.

Following the gastric hemorrhage on July 12, the patient's condition gradually deteriorated, during the subsequent 24 hours, with decreasing blood pressure and increasing temperature. During that time her hemoglobin was maintained by means of only one unit of blood, and her white cell count increased to 29,000/cu. mm. She died on July 14, 1961, having received a total of 15 units of blood during her hospitalization.

The majority of serial blood cultures showed no growth, but two cultures taken four days apart at the midpoint of her hospital stay revealed hemolytic Staphylococcus aureus.

An autopsy showed the following:

1. Right parametrial abscess
2. Generalized peritonitis
3. Left subphrenic abscess and right subphrenic abscess
4. Fecal fistula of the splenic flexure of the colon
5. Subacute endometritis and chronic myometritis
6. Right hydrothorax
7. Multiple gastric ulcers with severe gastrointestinal hemorrhage.

No uterine perforation was described. On microscopic examination, the esophagus showed patchy superficial ulceration. The gastric ulcers showed mildly hyperplastic mucosa at the margins. The bases of the ulcers extended through the muscular portion of the wall, and were composed of necrotic debris. Granulation tissue and fibrosis were found at the bases of the ulcers.

Case 2. M. W., a 36-year-old, white female, was first admitted in February, 1962, with a League of Nations Stage III carcinoma of the cervix. In order to include the entire pelvis, the patient was irradiated through six ports by means of a 250 KV machine. Additional irradiation was given to the right side of the pelvis through anterior and posterior ports by means of $Co.^{60}$ She was given 90 mg. of radium in an Ernst applicator for 72 hrs. The total air dose consisted of 11,200 r by the 250 KV machine, plus 2,400 r to the right pelvis by $Co.^{60}$ The radium dose to point A was 5,328 r.

The patient tolerated her radiotherapy well, except for a brief illness with fever, pelvic pain and a tenderness that was attributed to infection in her tumor.

When the patient was readmitted three months after her initial discharge from the hospital, she complained of severe right low-back pain and fever. Examination showed her to be chronically ill and in acute distress. Her blood pressure was 105/60 mm. Hg, her pulse rate was 88/min., and her temperature was 99.6°F. Physical examination showed generalized abdominal tenderness, and on pelvic examination there was a large, non-tender pelvic mass fixed to the right pelvic wall. Her hemoglobin was 9.6 Gm., her white blood cell count was 12,100/cu. mm., and her urinalysis was negative except for five or six white blood cells on the spun specimen. The patient's temperature continued to rise, and on the day following admission it reached 104°F.

The initial diagnosis was pelvic parametritis, and the patient received penicillin and streptomycin. On that regimen she became afebrile, and her general condition improved for one week, but then she again developed fever,

nausea, vomiting and diarrhea. Clinical and x-ray evidence was found of a partial bowel obstruction. Treatment then consisted of gastric suction, intravenous fluids and a wide range of antibiotics. Two days later the patient developed bright-red gastric bleeding, and passed several tarry stools. The bleeding recurred intermittently throughout the remainder of her hospital course, and she was given a total of 20 units of blood to replace the loss. Surgical consultation was obtained, and it was decided that the patient's general condition was too poor to permit surgical exploration. She was therefore maintained on supportive intravenous fluids, antibiotics and transfusions, but they had no apparent effect upon her progressively deteriorating status, and she died 70 days after her admission.

Because autopsy was not performed, no documentation of ulceration of the upper gastrointestinal tract is available in this case. It was felt, however, that the patient's course was compatible with the diagnosis of stress ulceration, with repeated gastrointestinal hemorrhage.

Case 3. R. S. was a 17-year-old gravida I, para 0 whose estimated date of confinement was July 15, 1963. She was a juvenile diabetic who had been followed since the age of 11 years. Control of her diabetes during this second pregnancy was thought to have been good, and her obstetrical record showed a 14-lb. weight gain, negative urine for albumin, and a normal blood pressure until her last clinic visit on July 5, 1963.

Three days prior to her admission at her local hospital, the patient had an onset of mild facial and leg edema, and noted a decrease in her urinary output. She was aware of no vision disturbances, epigastric pain or headache at that time.

On July 14, 1963, she had a sudden onset of epigastric pain, and shortly thereafter she developed grand mal seizures and became comatose. For reasons that were not recorded, medical assistance was not requested at that time, and indeed the patient was not seen by her local physician until approximately eight hours later. She was in deep coma by that time, her blood sugar was 220 mg. per cent, and a lumbar puncture showed that her spinal fluid was negative. The patient was then transferred to University Hospitals.

On admission there, the patient was comatose, and had generalized facial edema, 3+ pitting edema of the lower extremities and hypoactive reflexes. The rectal temperature was 103°F., the blood pressure was 130/80 mm. Hg, and the pulse rate was 140/min.

The lungs were clear, and the heart tones were normal. The fundus measured 25 cm. above the symphysis, and fetal heart tones were not audible. A urinalysis showed granular casts, 4+ albuminuria and 4+ glycosuria with no evidence of acetone. The blood urea nitrogen was 45 mg. per cent, the hemoglobin was 15.5 Gm. per cent, the hematocrit was 38 per cent, the white blood cell count was 11,000/cu. mm., and the serum electrolytes were within normal limits. The patient was unresponsive to painful stimuli, and did not convulse following her admission to University Hospitals. She was oliguric, her urinary output being 5-15 ml. per hour. Coagulation studies showed no abnormalities.

Nasogastric suction was instituted, the insulin dosage was titrated against her blood sugars, and she was given intravenous fluids to cover her urinary output, insensible loss and gastric suction. Intermittent doses of phenobarbital and daily doses of Dilantin were administered.

Shortly after her admission, she had a spontaneous onset of contractions, and she delivered a 1,430 Gm. macerated female stillborn 2½ hours later. Her urinary output increased to 80 ml./hr. 24 hours after admission, and during her second and third hospital days her urinary output was approximately 2,300 ml. per 24 hours. Following hydration, her electrolytes remained within normal limits, but she was found to be anemic. Her hemoglobin was 7.2 Gm. per cent, and there was an elevation of her white blood cell count to 22,900/cu. mm. at that time.

Three units of packed cells increased her hemoglobin to 9.3 Gm. per cent. During her second hospital day, her blood pressure rose to 168/112 mm. Hg, and it remained at that level thereafter.

On July 20, the patient was found to have a rapidly increasing pulse rate and a steadily

decreasing blood pressure. No evident cause could be found for those changes. A nasogastric tube was in place, and there was no drainage from it at that time. Physical examination showed only the evidence of coma and hyperpyrexia. The blood pressure continued to fall, and the patient quickly succumbed.

A postmortem examination revealed the following:

1. Acute, diffuse, membranous glomerular nephritis
2. Patchy lobular necrosis of the liver
3. Focal necrosis of the anterior pituitary
4. Severe anoxic encephalopathy
5. Acute gastric ulcers, with hemorrhage.

The nasogastric tube was found in the distal esophagus, and the stomach was filled with 1,100 cc. of clotted blood. The small and large intestines were also distended by clotted blood. There were several half-centimeter ulcers in the stomach just below the esophagogastric junction. On microscopic examination, the ulcerations were found to have penetrated to the submucosa, and the bases were covered with a small amount of matted inflammatory exudate. A minimal amount of acute inflammation was seen, but there were open vessels containing fibrin thrombi at the bases of the ulcerations.

DISCUSSION

Severe illness has been the common factor in the reported cases of stress ulceration in obstetric and gynecologic patients. Stress ulceration has occurred following radical surgery, severe postoperative infection and septic abortion. The cases reported here make two additions to that list: eclamptic coma and intestinal injury secondary to radiotherapy.

Our increasing success in prolonging life in critically ill patients may have the side effect of increasing the incidence of stress ulcers.

SUMMARY

Three cases of stress ulcers in critically ill patients have been presented. Two of the cases were documented at autopsy, but the third was diagnosed on the basis of clinical findings only. The possibility of this complication and its lethal nature are again emphasized.

REFERENCES

1. Dunn, L. J., and Nash, L. D.: Stress ulcers of stomach following obstetric and gynecologic surgery. Amer. J. Obstet. & Gynec., **90**:1288-1292, (Dec. 15) 1964.
2. Buka, N. J., Whelton, J. A., and Tenney, B.: Upper gastrointestinal hemorrhage after septic abortion. Amer. J. Obstet. & Gynec., **91**:504-508, (Feb. 15) 1965.

The Prevention of Postoperative Complications

On May 21 and 22, the Department of Surgery at the U. of I. College of Medicine will conduct a postgraduate short course in the Prevention of Postoperative Complications. The registration fee is $20, and the program is accredited for six hours of Category I credit by the American Academy of General Practice. Visitors will need parking permits, and they should request them when they register in advance.

Tuesday Evening, May 21

6:00 p.m. RECEPTION AND DINNER, University Athletic Club
Speaker: Myrtle K. Aydelotte, Ph.D., professor and former dean, U. of I. College of Nursing, "The Trends in Nursing Specialization and Their Impact on Care of the Surgical Patient"

Wednesday, May 22

Medical Amphitheater

8:30 a.m. PANEL: GASTROINTESTINAL INTUBATION—IS IT ABUSED?—J. A. Gius, M.D., moderator, and members of the surgical staff
9:15 a.m. "Preoperative Evaluation and Postoperative Care of the Duodenal Ulcer Patient"—Fletcher A. Miller, M.D., chairman, Department of Surgery, Creighton University School of Medicine, Omaha
10:35 a.m. PANEL: THE LETHAL POSTOPERATIVE RESPIRATORY COMPLICATIONS—J. L. Ehrenhaft, M.D., moderator, and members of surgical staff
11:30 a.m. PANEL: CARE OF THE WOUND; THE PREVENTION AND TREATMENT OF POSTOPERATIVE INFECTION—S. E. Ziffren, M.D., moderator, D. A. Culp, M.D., and Leonard DenBesten, M.D.

Lucas-Dodge Room, Memorial Union

12:30 p.m. LUNCHEON
2:00 p.m. "Special Problems in the Care of the Neonatal Postoperative Patient"—R. T. Soper, M.D.
2:15 p.m. "The Detection of the Patient Who May Be a Postoperative Bleeder"—J. A. Buckwalter, M.D.
2:30 p.m. "Is the Postoperative Diet Adequate?"—Edward E. Mason, M.D.
2:45 p.m. "Care of the Patient With Obtunded Consciousness"—H. B. Locksley, M.D.
3:15 p.m. SHORTENED CONVALESCENCE: THE PRESERVATION OF MUSCLE TONE, THE ROLE OF EXERCISE, AND THE CARE OF THE PARETIC PATIENT—R. D. Liechty, M.D., moderator, Maurice Schnell, M.D., and Alexandre Solomon, M.D.
4:00 p.m. COURSE SUMMARY ROUNDTABLE

Treatment of Functional Disorders: A Comparative Study

EMERSON K. WIRTZ, M.D.
West Des Moines

It appears fundamental that the efficacy of a drug can be affected by the setting in which it is evaluated, and this principle seems likely to apply especially in the treatment of functional disorders, where the emotions play such a strong role. Since the general practitioner treats these conditions with overwhelming frequency, his relationships with patients make him well qualified to evaluate the effect of a drug administered for disorders of this kind. This has been demonstrated in Great Britain, where general practitioners have collaborated in a number of such drug studies.[1]

The study reported here was undertaken in an effort to determine whether a valid drug evaluation could be performed in an office setting. The agent selected was Bellergal Spacetabs, a preparation which has demonstrated a capacity to relieve target symptoms associated with nervous tension. These were considered indices suitable for an objective evaluation designed to compare the effects obtained with an active drug and with a placebo.

METHOD AND MATERIAL

The 14 patients were nine women and five men ranging in age from 26 to 83 years (median age 51 years) who presented with functional complaints. In each instance a careful history was elicited at the patient's first visit, and the symptoms that the patient voiced spontaneously were recorded. The association between emotional factors and functional disorders was explained to each patient at that time, and the patient was told that the treatment he was to receive was intended to relieve the disturbing symptoms.

Vials containing 28 tablets of either Bellergal Spacetabs or placebos* were assigned numbers selected from a random-numbers table. During the patient's first visit, one of those vials was picked at random, and the patient was given it with instructions to take one tablet in the morning and one in the evening of each day, and to return two weeks later for reevaluation. That procedure was repeated every two weeks throughout the 12-week study period, without reference to previous reevaluations.

Neither the physician nor the patient knew which agent, Bellergal Spacetabs or placebos, had been handed out on any of these occasions, prior to the conclusion of the study. (Each Bellergal Spacetab contains phenobarbital USP 40 mg., ergotamine tartrate USP 0.6 mg., and levorotatory alkaloids of belladonna as malleates, 0.2 mg.) The effect of each agent was evaluated by rating the severity of symptoms on a five-point scale, from 0 ("absent") to 4 ("very severe").

RESULTS

An attempt was made to analyze all ratings made throughout the 12-week study period, but it was not feasible to use all of them because of the diversity of the drug sequences encountered. Accordingly, the analysis was confined to the first two periods of drug administration (a total of four weeks). Even then, there were four groups of patients—those who had received placebos for four

Dr. Wirtz is a general practitioner.

* Kindly supplied by Sandoz Pharmaceuticals, Hanover, New Jersey.

TABLE 1

RESULTS OF TREATMENT FOR TWO WEEKS

	Placebo Group (7 Patients)		Bellergal Group (7 Patients)			
	(1)	(2)	(3)	(4)	(5)	(6)
Target Symptoms	Pretreatment Severity (Average)	Change (Average)	Pretreatment Severity (Average)	Change (Average)	Difference in Change for the 2 Agents	Student t-value
Nervous Tension	2.86	−0.86	3.14	1.57	2.43**	6.14
Anxiety	3.71	−0.14	3.71	1.14	1.29**	2.67
Fatigue	3.57	0.29	3.71	1.71	1.43**	2.81
Insomnia	3.71	−0.29	3.14	1.86	2.14**	5.54
"Aches & Pains"	2.57	−0.71	3.43	1.14	1.86**	2.81
Depressed	3.86	−0.14	4.00	1.71	1.86**	4.80
Gastrointestinal Disorders	2.86	−0.14	3.43	1.71	1.86**	4.80
Palpitation	1.86	0.00	0.71	0.00	0.00	0.00
Backache	2.57	−0.57	2.43	0.14	0.71	1.58
Dizziness	2.00	−0.14	2.57	1.00	1.14	1.33
Restlessness	2.57	0.00	3.43	1.57	1.57**	2.75
Sweats	1.71	−0.71	3.14	0.43	1.14	1.48
Hyperventilation	3.43	0.00	3.71	1.71	1.71**	3.29
Hot Flashes	2.00	−0.29	2.86	0.86	1.14*	2.31
Constipation	0.00	0.00	1.57	0.14	0.14	0.31

* $p < 0.05$
** $p < 0.01$
Positive values in columns 5 and 6 favor Bellergal, negative values favor placebo.

TABLE 2

RESULTS OF TREATMENT FOR FOUR WEEKS

	Placebo Group (4 Patients)		Bellergal Group (3 Patients)			
	(1)	(2)	(3)	(4)	(5)	(6)
Target Symptoms	Pretreatment Severity (Average)	Change (Average)	Pretreatment Severity (Average)	Change (Average)	Difference in Change for the 2 Agents	Student t-value
Nervous Tension	2.50	−1.50	3.33	2.00	3.50**	+5.92
Anxiety	4.00	0.50	4.00	1.33	0.83	+1.02
Fatigue	3.25	−0.25	4.00	1.33	1.58	+1.11
Insomnia	3.50	0.00	3.33	2.00	2.00*	+2.93
"Aches & Pains"	2.25	−1.00	3.00	1.33	2.33*	+2.65
Depressed	3.75	0.00	4.00	1.67	1.67*	+2.26
Gastrointestinal Disorders	2.00	−0.50	3.00	1.33	1.83*	+2.25
Palpitation	2.25	1.25	0.67	0.33	−0.92	−0.68
Backache	2.50	−0.25	1.67	0.67	0.92	+1.15
Dizziness	2.75	0.75	2.33	1.33	0.58	+0.39
Restlessness	2.00	−1.75	2.67	0.33	2.08*	+1.67
Sweats	1.00	−1.25	3.00	1.33	2.58	+1.93
Hyperventilation	3.00	−0.50	4.00	2.00	2.50**	+4.23
Hot Flashes	2.00	0.00	2.67	1.00	1.00*	+2.07
Constipation	0.00	0.00	0.00	0.00	0.00	0.00

* $p < 0.05$
** $p < 0.01$
Positive values in columns 5 and 6 favor Bellergal, negative values favor placebo.

TABLE 3

RESULTS OF TREATMENT CROSSOVER

Target Symptoms	Placebo 2 Weeks Then Bellergal 2 Weeks (3 Patients) (1) Change in Severity After 2 Weeks (Placebo)	(2) Change in Severity After 4 Weeks (Bellergal)	Bellergal 2 Weeks Then Placebo 2 Weeks (4 Patients) (3) Change in Severity After 2 Weeks (Bellergal)	(4) Change in Severity After 4 Weeks (Placebo)	(5) Student t-value
Nervous Tension	−0.67	1.33	1.50	−2.50	5.86**
Anxiety	−0.34	1.67	1.50	−1.50	3.35**
Fatigue	0.00	2.00	2.00	−1.75	3.35**
Insomnia	0.00	2.67	1.50	−2.00	5.29**
"Aches & Pains"	0.33	0.34	0.75	0.50	−0.18
Depressed	0.00	1.33	1.75	−1.75	3.31*
Gastrointestinal Disorders	0.00	2.33	1.25	−0.75	7.58**
Palpitation	−0.67	1.67	0.25	−0.75	3.82**
Backache	−0.66	1.00	0.00	0.50	0.85
Dizziness	−1.00	2.00	1.25	−1.25	2.20*
Restlessness	0.00	1.33	2.50	−2.50	4.71**
Sweats	−1.00	1.00	0.75	−0.50	0.92
Hyperventilation	0.00	2.33	1.50	−1.75	3.90**
Hot Flashes	−0.67	0.67	1.25	−0.75	1.35
Constipation	0.00	0.00	0.25	2.25	−2.23*

* $p < 0.05$
** $p < 0.01$
Positive values of t (Column 5) favor Bellergal, negative values favor placebo.

weeks; those who had received Bellergal Spacetabs for four weeks; those who had received Bellergal Spacetabs for the first two weeks and then placebos for two weeks; and those who had first received placebos and then Bellergal Spacetabs for two weeks each.

Table 1 shows the effects obtained with the two agents during the first two weeks of treatment. When changes in symptom severity were tested for statistical significance, Bellergal was found to be significantly better than placebo in alleviating gastrointestinal disorders, hot flashes and "aches and pains," as well as nervous tension, fatigue, insomnia, anxiety and restlessness.

Table 2 shows the results in patients who received placebos or Bellergal Spacetabs for four weeks. Statistical analysis again showed Bellergal more effective than placebos in reducing gastrointestinal disorders, hot flashes, and "aches and pains," nervous tension, insomnia and restlessness, as well as hyperventilation.

The results of a cross-over study are shown in Table 3. Patients who received placebos first remained relatively unchanged during the first two weeks, but showed improvement during the subsequent two weeks when Bellergal had been given them. Patients who received Bellergal for the first two weeks showed a reduction of severity in 14 symptoms. Then 12 of the symptoms worsened during the subsequent two weeks of placebo ingestion. Bellergal was significantly superior to placebo in relieving gastrointestinal disorders, palpitation, anxiety, nervous tension, insomnia, restlessness, depression, fatigue, hyperventilation and dizziness. Placebo was significantly better than Bellergal in relieving constipation.

DISCUSSION

This study indicates that a drug evaluation can be conducted in the office setting, but that much thought should go into designing the study. In the trials described here, assiduous and extensive evaluation of each patient was intended to compensate for the smallness of the number of patients available for study. In

some degree, however, that plan was disrupted by the technique that was intended to assure "blindness" in the study. Because lettering vials "A" and "B" to distinguish between the agents would have been unsatisfactory, the vials containing Bellergal Spacetabs and placebos were both coded with numbers taken from a random numbers table. However when vials were distributed on a random basis, the sequence of medications became so irregular as to complicate the requisite statistical analysis. Consequently, the analysis had to be confined to the data obtained on four groups of patients during the first four weeks of treatment.

The findings demonstrated that Bellergal was significantly superior to placebo in improving symptoms associated with functional disorders. Those results are in line with ones reported by Bernstein and Simon,[2] who found that Bellergal Spacetabs provided excellent-to-good relief of 78 per cent of the aggregate of presenting symptoms, in contrast to just 55 per cent for phenobarbital alone, and 17 per cent for placebo.

It was interesting to note the reports of better sleep habits and a reduction in the complaints of insomnia. These could very well be attributed to relief from annoying symptoms such as "nervous stomach," indigestion, hot flashes, fatigue and palpitations.

SUMMARY

A comparative study of Bellergal Spacetabs and placebos in an office setting has been reported. An analysis of changes in symptom-severity revealed that Bellergal Spacetabs were significantly more effective in relieving functional disorders associated with nervous tension.

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2. Bernstein, A., and Simon, F.: Treatment of cardiovascular symptoms of vasomotor origin. Angiology, **9**:197-201, (Aug.) 1958.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 495

Obstructive Jaundice in a Child

RAYMOND F. SHEETS, M.D., Chairman
C.P.C. Committee
MRS. REBECCA FRIEDMAN, Secretary

SUMMARY OF CLINICAL FINDINGS

SEVEN WEEKS BEFORE HER ADMISSION to University Hospitals, the patient, a three-year-old white girl, became fussy, irritable, anorexic and sleepy. A few days later, she developed jaundice and a low-grade fever. During the subsequent three weeks, while under the observation of her family physician, she seemed to improve. Her jaundice and previous symptoms receded. Then she developed a sudden increase of jaundice, abdominal pain, clay-colored stools and dark-brown urine. She had three severe nosebleeds, and was intermittently febrile, her temperature ranging from 99-103°F. When she was admitted to a local hospital it was noted that her liver was palpable 4 cm. below the costal margin, and she received two blood transfusions. The laboratory studies that were done are outlined on the next page.

The patient's developmental history had been normal. Her medical history and her family history contained no helpful information. The patient had had no known exposure to drugs or toxins.

Pertinent factors on the admission physical examination were: temperature 101°F.; pulse rate 132/min.; respirations 48/min.; height 36

LABORATORY STUDIES

(Date of patient's first admission to U. of I. Hospitals 3/12)

Date	Hematocrit	Hemoglobin	White Blood Cells	Bands	Segmentals	Lymphocytes	Monocytes	Reticulocytes	Platelets
2/18	29.5	9.3	18,400		70	28	2	2.7	
3/16	28	8.0	26,350	3	68	22	7	2.5	765,000
4/28	34	10.3	16,000	3	76	14	8		890,000
5/13	15	4.5	35,550						
5/26		11.0	14,400		55	37	7		

	Thymol turbidity
3/12	5.8
3/24	5.5

	Eosinophil	Sed. Rate	Bilirubin Direct	Bilirubin Indirect	SGOT	SGPT	Alkaline Phosphatase
3/18		143	7.4	9.5	103	62	720
3/12		140	5.4	7.8	104		
3/24		124	6.65	4.3	98		21.0
4/28			8.3	6	88		18.5

	Urinalyses Specific Gravity	Bilirubin	Micros	Urobilinogen
2/18	1.020	+4	Neg.	
3/22	1.017		Neg.	Neg.

	Cholesterol	Prothrombin Time	Control
2/22	1,680 units	13.8	12.0
3/19	598 mg. per cent	14.8	13.0
3/24	648		
4/12	246		

Other Tests:

Agglutination tests negative for leptospirosis, Salmonella, Paratyphoid, Brucella, Rickettsia and Proteus
Stool cultures: negative
Blood type: O positive
Serum proteins: albumin 3.8 and globulins 2.6 Gm./100 cc.
Fecal urobilinogen: 8.3 mg. per cent
Urinalysis for porphyrins: negative
Sweat chlorides: 11 mEq./L.
14 mEq./L.
24-hr. stools for urobilinogen: 3.5 per cent
24-hr. urine for urobilinogen: 0.25 mg. per cent
Three blood cultures negative
Chest film negative

in.; and weight 26 lbs. The patient was described as a shy, jaundiced little girl in no acute distress. The sclerae were jaundiced, and the lips and buccal mucosa were pale. There was no lymphadenopathy. Examination of the heart and lungs revealed no abnormal findings. The abdomen was distended and tense. The liver was palpable 7 cm. below the right costal margin. The spleen was not palpable. The diagnostic studies that were done are also reported in the table. The patient continued to have intermittent fever ranging from 101 to 102°F. She had occasional afebrile periods of three or four days' duration.

About two weeks after admission she was started on high doses of penicillin and Chloromycetin. A few days later she had an exploratory laparotomy, and a T-tube cholangiogram. During the laparotomy it was noted that the entire biliary ductal system was filled with "a

gelatinous, viscid, mucoid, grumous collection of material which was pigmented in some areas and grayish-white in others." Several attempts were made to obtain a better cholangiogram. The patient continued having intermittent episodes of fever and jaundice.

Two months after her admission to University Hospitals she was reexplored, and afterward she was followed in the outpatient clinic. She expired 3½ months after her last laparotomy.

Dr. R. T. Soper, Surgery: Before we finish CPC No. 495, this afternoon, we shall all be looking at it through jaundiced eyes. Miss Mary Boller will introduce the subject from the students' point of view.

Miss Mary Boller, junior ward clerk: We believe the history, physical examination and laboratory values are most consistent with obstructive jaundice and a superimposed cholangitis. The patient's clinical history before admission was suggestive of a viral hepatitis, and we found it necessary to consider that possibility. However the clinical picture changed significantly thereafter, to include intermittent jaundice, fever of several months' duration, and no decrease in the hyperbilirubinemia after 1½ months of hospitalization—all of which are unlikely in cases of viral hepatitis unless it is a recurrent or chronic type. The laboratory values also seemed to be consistent with an obstructive process. They included the high serum cholesterols, the high alkaline-phosphatase values, the almost normal prothrombin times, and the low fecal and urine urobilinogens concomitant with an increased urine bilirubin. The SGOT and SGPT were slightly elevated, but not to the extent commonly associated with viral hepatitis. And the elevation could be explained by an infection secondary to the obstruction. However there is one variation of hepatitis that could produce an obstructive picture because of similar laboratory values. It is cholangiolytic hepatitis, which causes intrahepatic obstruction. Laparotomy is usually necessary to rule out extrahepatic biliary obstruction. But since the protocol stated that the entire biliary tree was involved, and because in cholangiolytic hepatitis there should be the elevated SGOT and SGPT levels that are seen in hepatocellular disease, we gave that diagnosis no further consideration.

Carcinoma of the liver, biliary ducts or gallbladder, and metastasis from other tumors such as Wilms' or neuroblastoma must be considered within the differential diagnosis of obstructive jaundice. We felt that secondary metastasis would not be likely to give the nearly total obstruction that was seen in this patient, and also we saw no indications of a primary tumor outside the liver-biliary system. A hepatoma—one of the more likely tumors to be found in children—would produce many of the signs and symptoms seen in this case, but it does not usually present with the sudden onset of jaundice that was seen here. In fact it rarely causes icterus. Both malignant cholangioma and carcinoma of the bile ducts would be likely explanations for the obstruction, but like hepatoma they are quite rare in children. A carcinoma of the head of the pancreas, though also rare in children, could cause obstructive jaundice, and the jaundice in such instances is sometimes intermittent as it was in this case. It also can lead to gastrointestinal bleeding, and that would be helpful in explaining the patient's anemia, especially after her second laparotomy. But we have no report of a positive stool guaiac to help us here. In addition, we have been given no laboratory or surgical report indicating pancreatic involvement.

A second important obstructive phenomenon that we considered was the choledochal cyst. It is a dilatation of the common bile duct thought to be caused by weakness of the wall, congenital stenosis or cholangitis. Reasons favoring a choledochal cyst in this patient included its 80 per cent incidence in females less than 10 years of age, the occurrence of nervousness and irritability in many such patients several months prior to the development of jaundice, the intermittent nature of the jaundice, and the frequent presence of infection. Clinically the patient usually has a distended, tense abdomen, clay-colored stools and dark urine. Laboratory values usually show a mild anemia in addition to leukocytosis. But in a patient with choledochal cyst a cystic mass should be found in the right upper quadrant, the course normally would be benign following removal of the cyst, x-rays should show a non-function-

ing gallbladder and displacement of the stomach and duodenum to the left, and the cyst probably should contain a thin dark-brown fluid, instead of the thick, mucoid material found at surgery in this child.

Other causes of obstruction to be considered are, first of all, parasitic infections. Strongyloidosis and ascariasis are ruled out by the clinical history and by the lack of stool findings. A hydatid cyst is ruled out not only by the above but also by the lack of x-ray findings. Second, certain bacterial infections, leptospirosis, Salmonelleae, Brucellaceae, Rickettsieae and Proteeae are eliminated by the negative agglutination tests. Third, bilirubin stones, which are secondary to hemolytic anemia, were unlikely in view of their rarity in infants. Also the operative report made no mention of choledochal lithiasis. A hemolytic anemia itself was also unlikely in this case because of the negative history for neonatal jaundice, the absence of splenomegaly and the relatively modest increase in the reticulocyte count. Fourth, cystic fibrosis was ruled out by the negative family history, the lack of respiratory difficulty, the normal sweat chlorides and the negative history for malabsorption problems. Fifth, benign stricture of the common duct was ruled out because it is quite rare in patients who have had no prior biliary-tract surgery, although it may occur secondary to benign tumor of the common duct such as the papilloma or the adenoma.

The possibility of supervening supurative cholangitis must be entertained in any case of obstruction of the biliary tree. It occurs when the biliary-tract obstruction is accompanied by infection. In this patient the signs and symptoms pointing toward a cholangitis were the jaundice, abdominal pain, fever, large liver, leukocytosis with a shift to the left and the elevated SGOT and SGPT. An elevated ESR and platelet count are also compatible with this infectious process. The findings which were not explained by, or were inconsistent with, cholangitis were (1) negative blood cultures; (2) the indeterminate nature of the substance found in the common bile duct at laparotomy; and (3) the variable anemia.

In conclusion, then, we suggest that this patient had an obstructive type of jaundice, and we have chosen choledochal cyst as a possible cause. The supervening cholangitis may have changed the character of the cystic fluid and caused involvement of the entire biliary tree. Also because of the long-standing nature of the obstruction and because the first laparotomy failed to relieve it, a biliary type of cirrhosis may have developed and may have been responsible for the child's eventual death.

Dr. Soper: Thank you, Miss Boller, for a most interesting and complete discussion of the problem.

We are very honored, this afternoon, to have as guest discussant one of the most eminent pediatricians in the State of Iowa. Dr. Lee Forrest Hill has been in the private practice of pediatrics in Des Moines for more years than I am going to say. He has been recognized here and elsewhere in the country, and internationally, as one of the leading figures in his special field of interest. He is past-president of the American Academy of Pediatrics as well as of the American Board of Pediatrics. He was the recipient of the American Academy's annual Grules Award in 1952 for his interest and contributions to the field of developmental pediatrics. He also is a clinical professor of pediatrics in the U. of I. College of Medicine.

One of Dr. Hill's fields of special interest has been the jaundiced child, and I think it is particularly appropriate for us to have him here to discuss the very baffling and complex problem of jaundice in the young child. It gives me a great deal of pleasure to welcome Dr. Hill to the podium.

Dr. Lee Forrest Hill, Pediatrics: Thank you, Dr. Soper. I already am prepared to be greatly surprised when we finally find out what happened in the case before us today. The protocol described a three-year-old girl who acquired some type of liver disease that resulted in her death some seven months later.

I assume that she was well up to the onset of her present illness. If that assumption is correct, a number of causes of jaundice that either originate in the neonatal period or are congenital can be eliminated at once: (1) neonatal hepatitis and biliary atresia which might have progressed to hepatic cirrhosis; (2) portal-vein thrombosis secondary to an infected umbilicus; (3) toxoplasmosis; (4) cytomegalic

inclusion-body disease; (5) syphilis; (6) galactosemia; (7) Wilson's disease; (8) Gilbert's disease; and (9) Crigler-Najjar syndrome. Also I shall dismiss prehepatic hemolytic causes of jaundice from consideration, since the protocol clearly defines an obstructive form of jaundice. Left for consideration are acquired liver diseases that are fatal over a few months' time. Not many children past neonatal age die from diseases of the liver itself. But before I discuss these possibilities further, let me examine the protocol in more detail.

At the onset of her illness, the child was fussy, irritable, anorexic and sleepy. Jaundice and a low-grade fever followed a few days later. At this point I think most of us would be a little hesitant about making a diagnosis of infectious hepatitis. Apparently that was the thinking of the family physician, for we are told that he observed the patient over the next three weeks. We are not told about clinical findings and laboratory studies obtained during that period. It would be helpful to know whether she had an enlarged, tender liver, white stools and dark urine. Additional desirable information would have been a serum bilirubin determination, with a partition into conjugated and unconjugated portions. The transaminase enzymes SGOT and SGPT are usually greatly elevated in acute infectious hepatitis, and in the light of subsequent events it would have been nice to know what those values were in the early stages of the illness. Infectious mononucleosis sometimes mimics infectious hepatitis very closely and is recognized as the etiologic agent on the basis of abnormal cells in the blood smear and a positive heterophile-antibody titre. Homologous serum hepatitis B could be excluded in this case by the fact that no serum-containing injections had been given.

But none of those confirmatory clinical and laboratory findings that may have been reported during the three-week period when the child was being observed are available to us, and I can only make the point that infectious hepatitis was a good possibility.

In children, infectious hepatitis is most often a benign disease lasting from one to three weeks, and it is usually followed by complete recovery. Rarely, there may be a prolonged course lasting up to 80 days, and also rarely, there may be a progressive, fulminant course ending in death after 10 days or so, with pathologic findings of acute yellow atrophy in the liver. Another infrequent course that infectious hepatitis may take in children is a chronic post-necrotic form of cirrhosis.

But we learn from the protocol that at a time when the child should have been recovering, if her illness had been infectious hepatitis, she suddenly become worse. Jaundice increased, abdominal pain was present, stools were clay-colored and the urine was dark brown. Obviously the previous diagnosis of infectious hepatitis must be reevaluated, and other possibilities considered.

Again the child's local physician must have had a similar reaction, for she was then hospitalized in her home area. If my arithmetic is correct, she must have spent nearly a month in the local hospital. We are told only that she had three severe nosebleeds, that she was intermittently febrile, and that her liver was palpable 4 cm. below the costal margin. A few laboratory test results are available to us. Mild anemia was present, as shown by the hematocrit of 29.5 and the hemoglobin of 9.3 Gm. The white blood cell count was considerably elevated, being 18,400/cu. mm., with 70 per cent of the cells segmented. No platelet count is recorded for that date, but subsequently platelets were found to be abundantly present. A urine test was negative except for bile. A cholesterol value of 1,680 units was recorded. I don't know the relation between units and milligrams of cholesterol, but in view of the values obtained later at this hospital, I presume 1,680 units represented an elevation. The essentially normal prothrombin time excluded the possibility that her nosebleeds were on the basis of hypoprothrombinemia. We are told that the youngster received two blood transfusions.

Seven weeks after the onset of her illness, she was admitted to University Hospitals. We learn that her liver was then enlarged to 7 cm. below the costal margin. Her abdomen was described as distended and tense, but no mention was made of ascites. Her spleen was not palpable, and that report suggested that portal-vein thrombosis with hypertension was not a

factor in her illness. From the brief comment in the protocol I gain the impression that nothing of significance in addition to the greatly enlarged liver and the obvious jaundice was found on physical examination.

On the basis of the information that I have reviewed thus far, I should hesitate even to hazard a guess as to what was causing the hepatomegaly and obstructive jaundice. Certainly acute infectious hepatitis of viral etiology has receded further into the background. A number of other possibilities might be mentioned, but I think it would be more profitable to postpone such a discussion until more extensive laboratory and perhaps other forms of investigation have been carried out. That may have been the thinking of the physician who cared for this little girl at this hospital, for a battery of investigative studies were then performed. We might take a look now at what was found.

The rather marked leukocytosis observed at the local hospital was confirmed on several occasions. Its significance is not completely clear at the moment, because even in a malignancy there may be fever and leukocytosis. The child might have had a malignancy or an obstructive lesion of some kind, with a secondary infection. It is doubtful that it indicated a bacterial infection of the liver such as solitary or multiple abscesses or cholecystitis and an ascending cholangitis. Blood and stool cultures and agglutination titres for many possible bacteria were all negative. Amebic abscess is also associated with leukocytosis, but it rarely if ever occurs in children of this patient's age. I think such remote possibilities as those can be dismissed.

Bilirubin values were found to be quite high and were about equally divided between the conjugated and unconjugated forms. A finding of considerable significance was the very low value of 3.5 mg. of urobilinogen in 24-hr. stools. The range for focal urobilinogen in normal adults is from 40 to 250 mg./day. In normal three-year-old children the values would probably be considerably less, but 3.5 mg. in 24 hrs. is so low as to indicate almost complete obstruction of the excretion of bilirubin into the intestinal tract. The low values for both stool and urine urobilinogen suggest strongly that the obstruction was post-hepatic—in the biliary ductal system—rather than hepatic.

The other studies that were done were of less diagnostic significance. Thymol turbidities of 5.8 and 5.5 were only slightly increased. The sedimentation rate was markedly increased, and the transaminases SGOT and SGPT were both increased. On my protocol the value given for alkaline phosphatase is 720. That I don't understand, and I presume it is an error. The other two values of 21.0 and 18.5 represent increased levels of alkaline phosphatase if they are expressed as Bodansky units. Cholesterol was also considerably increased on several occasions. All of these abnormal findings are consistent with some form of liver pathology, but are not particularly helpful in pointing to any specific etiology.

With this additional information in mind, I should like to pause now to give further consideration to some of the diagnostic possibilities. I said earlier that the congenital and neonatal causes of jaundice could be eliminated because of the child's normal health during the first three years of her life. Prehepatic causes of jaundice due to hemolytic disease can also be excluded. Thus we are left with the hepatic and post-hepatic causes of jaundice and hepatomegaly of some 2-2½ months' duration.

Among the causes of hepatic disease that require brief consideration are, first, poisoning by such agents as carbon tetrachloride or phosphorus. We have been told, however, that the child had no exposure to drugs or toxins, and the clinical story should have been different if she had come in contact with a poison. Second are the infections—viral, bacterial, spirochetal and protozoal. I don't think at this point that I can exclude the possibility that this child might have had an unusually prolonged attack of viral or infectious hepatitis which could, though it is most unlikely that it should, cause her death. Bacterial infections are usually manifested by a large solitary abscess of the liver, or by multiple smaller abscesses. That possibility I think can be dismissed, for marked tenderness over the liver has not been described. Apparently there was some concern on the part of the physicians caring for this child that she might have an infection somewhere in her liver or biliary ducts,

for I note that she was given intensive antibacterial therapy for a couple of weeks with penicillin and Chloromycetin.

Spirochetal infections such as Weil's disease and syphilis should have other identifying manifestations. The agglutination titre for leptospirosis was negative, and there were no skin hemorrhages or abnormal urine findings. Fourth are the neoplastic diseases of the liver, and they cannot be so readily dismissed as diagnostic possibilities. In fact malignant disease would be my first diagnostic choice in this child, but I think it more likely that the malignancy arose from the post-hepatic ductal system, rather than from the liver itself. I shall comment more on that point in a moment.

In a three-year-old child, metastatic neoplasms are more common than malignancies arising in the liver. An attractive possibility in the child under discussion would be a neuroblastoma with lymph-node involvement and extensive metastases to the liver. The primary tumor or the enlarged lymph nodes could have obstructed the extrahepatic biliary ductal system. I don't know whether intravenous pyelograms, x-rays of the bones and a bone-marrow examination were done, but they would have been the appropriate studies if such a lesion had been suspected.

Carcinoma of the liver rarely occurs in young children either as a solitary mass or as multiple foci. Sometimes it is associated with cirrhosis of the liver, but apparently not so often as in adults. A carcinoma arising from the bile ducts—cholangiocellular carcinoma—is even more uncommon than primary hepatoma.

As far as the liver is concerned, then, I think I should have two possible conditions in mind. One would be neoplastic disease, most likely metastatic, and the other would be a prolonged infectious hepatitis.

Now I should like to consider the post-hepatic or biliary-ductal-system possibilities for a moment or two. We are told that two weeks after the patient's admission an exploratory laparotomy was performed, and that difficulty was encountered in getting a satisfactory cholangiogram. Presumably the trouble consisted of finding the entire biliary ductal system filled with "a gelatinous, viscid, mucoid, grumous collection of material which was pigmented in some areas and grayish-white in others." I was stumped by the word *grumous,* so I looked it up in Webster's dictionary. Sure enough it was there, and it means a thick, viscid fluid, like a clot of blood. I asked some of my pathologist friends what material like that in the bile ducts might be, and was told that it was stagnant bile secondary to obstruction. I have no better explanation, so I shall assume there was almost a complete obstruction to the flow of bile in the biliary ductal system.

What could account for such an obstruction? Cholelithiasis, with a stone obstructing the common duct, seems quite unlikely. A bacterial infection of the bile ducts—cholangitis—can be excluded on the basis of the material found in the ducts. Had there been a cholangitis, I should have thought that material found in the bile ducts at laparotomy would have been purulent rather than the "grumous" material that was described. Thick mucus in the ducts due to fibrocystic disease of the pancreas was ruled out by the normal sweat test.

A choledochal cyst runs a different course than that which was observed in this girl, and would be most unlikely to result in death in seven months.

Again I must return to what I believe is the most likely explanation for this girl's illness and death, and that is a post-hepatic obstruction of the ductal system either by the lesion itself or by metastatic lymph nodes. Carcinoma of the common duct, of the ampulla of Vater or of the head of the pancreas are possibilities. A neuroblastoma or lymphosarcoma with lymph nodes compressing the common duct are some other possibilities.

The diagnosis that intrigues me most is botryoid rhabdomyosarcoma of the bile ducts. Hays and Snyder, of Los Angeles, in the December, 1965, issue of the AMERICAN JOURNAL OF DISEASES OF CHILDREN, reported in detail on two cases they had seen, and they described 10 others from the literature. The similarities between those 12 patients and the one under discussion here are striking indeed. All had prolonged jaundice of the obstructive type and hepatomegaly, and all died within comparable periods. Most of the patients, including the authors' two cases, were under treatment for

several weeks or months for infectious hepatitis, before laparotomy revealed the correct diagnosis. An upper-gastrointestinal x-ray study showed displacement of the stomach to the left and compression of the duodenum. Intravenous pyelograms, x-rays of the bone and a bone-marrow examination were negative. Sedimentation rates, transaminases and alkaline phosphatase studies were much the same as in this case.

The neoplasm arose in the common duct, enlarging it so that on superficial examination it resembled a choledochal cyst. But sections obtained at biopsy showed histologic findings consistent with botryoid rhabdomyosarcoma of the common bile duct. No cases have been seen in infants under 18 months of age or in children over 11 years of age.

Of the various diagnostic possibilities that I have mentioned, it would be my conclusion that neoplastic disease obstructing the biliary ductal system best explains the clinical and laboratory findings and the course of this child's illness. She could have had a botryoid rhabdomyosarcoma of the bile ducts, but a definitive diagnosis could have been made only by an exploratory operation.

I suppose that some preliminary x-ray studies of the gastrointestinal tract and kidneys were done for the purpose of determining whether there was evidence of displacement of organs by a mass. Could we see those now?

Dr. Albert C. Selke, Radiology: The first radiograph (Figure 1) was obtained several days after the patient's admission. It is a supine radiograph of the abdomen. I think it shows the large size of the liver. There were no other soft-tissue masses or calcifications within the abdominal cavity that would suggest neuroblastoma or other neoplasms. A subsequent intravenous pyelogram was normal, with no displacement or distortion of the renal collecting systems.

Figure 2 is a selected radiograph from an



Figure 1. Supine radiograph of the abdomen, indicating enlargement of the liver but showing no soft-tissue masses or calcifications suggestive of a neoplasm.

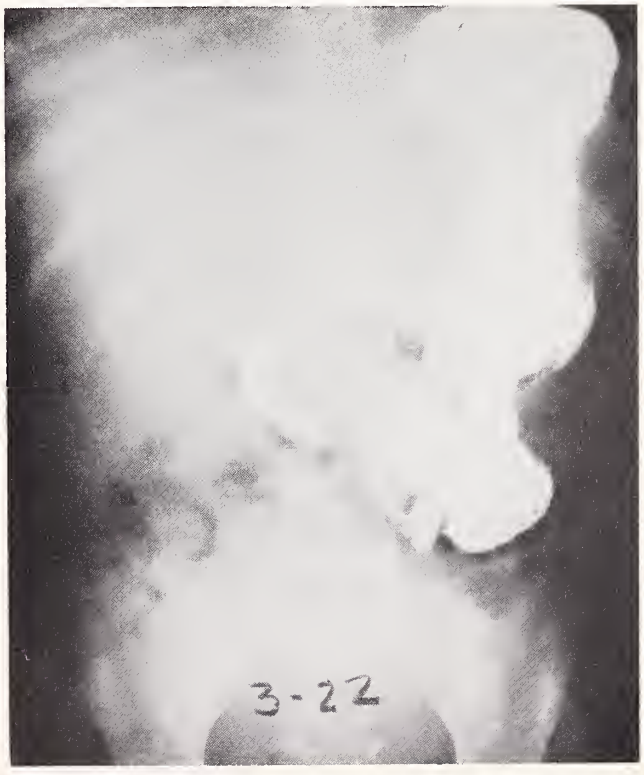


Figure 2. One of the radiographs from a GI series, showing distortion and displacement of the duodenal bulb and the first portion of the duodenal loop.



Figure 3. The initial cholangiogram performed at the first laparotomy, showing free flow of contrast medium through the distal bile duct and into the duodenum. There was some retrograde filling of the right and left hepatic radicals and some filling defects in the common hepatic duct.



Figure 4. This repeat cholangiogram again shows free flow through the cystic duct into the common bile duct and passage into the duodenum, but no reflux filling of the common hepatic duct or hepatic radicals.

upper-gastrointestinal study. It shows distortion and displacement of the duodenal bulb



Figure 5. This cholangiogram was done at the time of reexploration, 3½ months after the patient's initial admission. The flow was normal through the cystic duct, but in the common hepatic duct there was a large mass distorting and preventing any reflux filling of the hepatic radicals. But again there was flow into the duodenum.

and of the first portion of the duodenal loop, which was thought perhaps to be related to an enlarged gallbladder or common bile duct. There was no extrinsic distortion of the stomach, and no evidence of intrinsic disease of the upper-gastrointestinal tract.

Next (Figure 3) was the initial cholangiogram performed at the first laparotomy. The tip of the tube was inserted in the cystic duct, and we had free flow of contrast medium through the distal bile duct and into the duodenum. There was some retrograde filling of the right and left hepatic radicals, and I think we can recognize some filling defects in the common hepatic duct. Figure 4 was a repeat cholangiogram. The child had numerous other cholangiograms after that, but none of them was completely successful, and on none of them did we ever again see the hepatic radicals. This picture again shows free flow through the cystic duct into the distal common bile duct, with passage into the duodenum, but no reflux filling of the common hepatic duct or the hepatic radicals.

The last cholangiogram (Figure 5) was done

at the time of the reexploration, 3½ months after the patient's initial admission. Here again the contrast was passed in through the tube that was lying in the gallbladder. The gallbladder itself was smooth and free of defects. The flow was normal through the cystic duct, but then in the common hepatic duct there was a large mass distorting and preventing any reflux filling of the hepatic radicals. But, again, there was flow into the duodenum.

Dr. Soper: Before we hear a report on the histologic findings, I should like to describe the gross findings at our two laparotomies. At both times the extrahepatic biliary system was grossly distended, and when we opened the biliary system we were greeted by a rush of very grumous, pale, viscid, semi-liquid material. It was too liquid to take out with scoops and forceps, and we had to insert a catheter above it and then irrigate with saline in order to extract it from the common bile duct. However when we had emptied the system of that very grumous material, we were then able to see non-pigmented white bile draining proximally, and a day or two later, after T-tube drainage of the common duct, that bile became pigmented. The obstruction appeared to be in the common bile duct, upstream rather than downstream toward the duodenum. We cultured that material and examined it histologically, but obtained no real clue as to its identity at the time of the first operation. During the second operation we biopsied the liver and common bile duct and in addition submitted more of this same grumous matter to the pathologist. That time we received material assistance in establishing a specific diagnosis. We shall now have a report on those histologic findings.

Dr. F. W. Stamler, Pathology: The material received from the first operative procedure included a liver biopsy that showed intense bile stasis and focal degeneration and necrosis of liver cells, with some focal inflammatory change. It was interpreted, at the time, as being compatible with viral hepatitis of a cholestatic type. A lymph node submitted showed non-specific hyperplasia. The contents of the bile duct, as Dr. Soper has said, were not interpreted as showing anything diagnostic at that time.

During the next operative procedure we again were provided a liver biopsy—a biopsy of the common-bile-duct wall and the contents of the obstructed common bile duct. At that time the diagnosis of neoplasm obstructing the common duct became obvious. It was essentially the diagnosis that Dr. Hill has given, although if one wishes to quibble, the neoplasm was an embryonic sarcoma without any rhabdomyoblastic differentiation. That, incidentally, is true in about half of the tumors of the sort. In some, one can demonstrate enough maturation to make a diagnosis of embryonal rhabdomyosarcoma, but in others there is simply undifferentiated embryonic tissue in which no specific maturation or differentiation has occurred. At that time the liver showed more advanced changes of biliary cirrhosis.

I can offer very little clarification regarding two points: first, the febrile course, for there was very little inflammation in the biopsy material on either occasion—really not enough to account for high-grade fever or leukocytosis; second, for the considerable hepatic enlargement which was supposed to have occurred. At the time of the first biopsy the liver showed rather intense bile stasis. Dark masses of inspissated bile were present either in distended canaliculi or in remnants of necrotic cells. There were a few foci of inflammatory reaction to that process, and the entire lobular structure had a rather disorderly appearance that could have been consistent with an active phase of viral hepatitis, but is not really diagnostic of viral infection. An occasional focus of liver parenchymal degeneration was seen—the so-called bile granuloma that results from extrusion of bile associated with a focal area of liver-cell degeneration and mild inflammatory reaction. But again that was a minor finding. A connective-tissue stain of the liver at the time of the second operation showed a fair degree of periportal inflammation, fibrosis and bile-duct proliferation typical of the early pattern of biliary cirrhosis.

Now we come to the neoplasm. Dr. Hill used the term *botryoid* in describing the tumor. *Botryoid* means grape-like, and we see (Figure 6) that this tumor did consist of polypoid masses of soft, rather myxomatous or gelati-

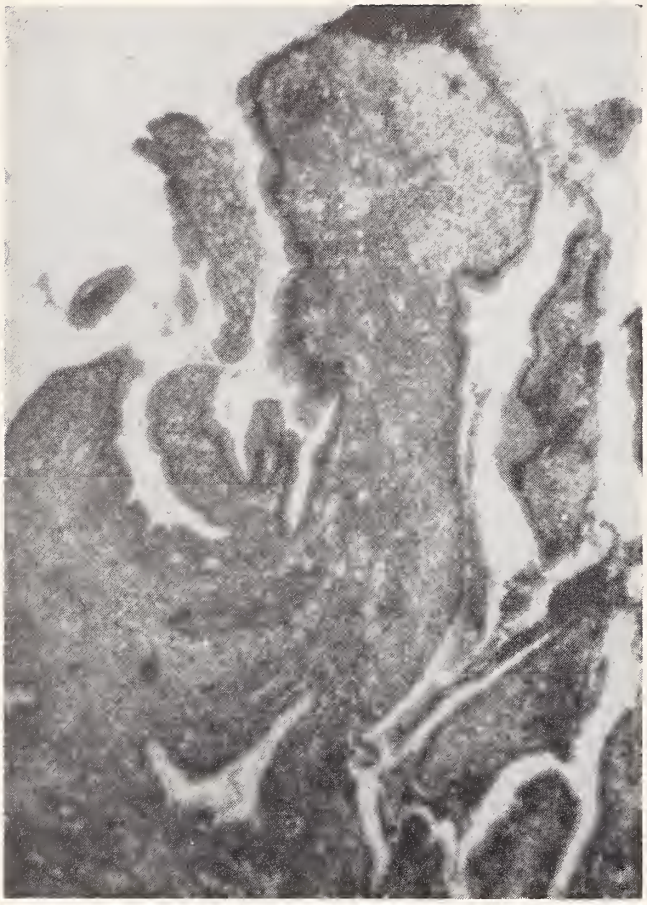


Figure 6. Low-power photomicrograph of botryoid sarcoma obstructing the common bile duct.

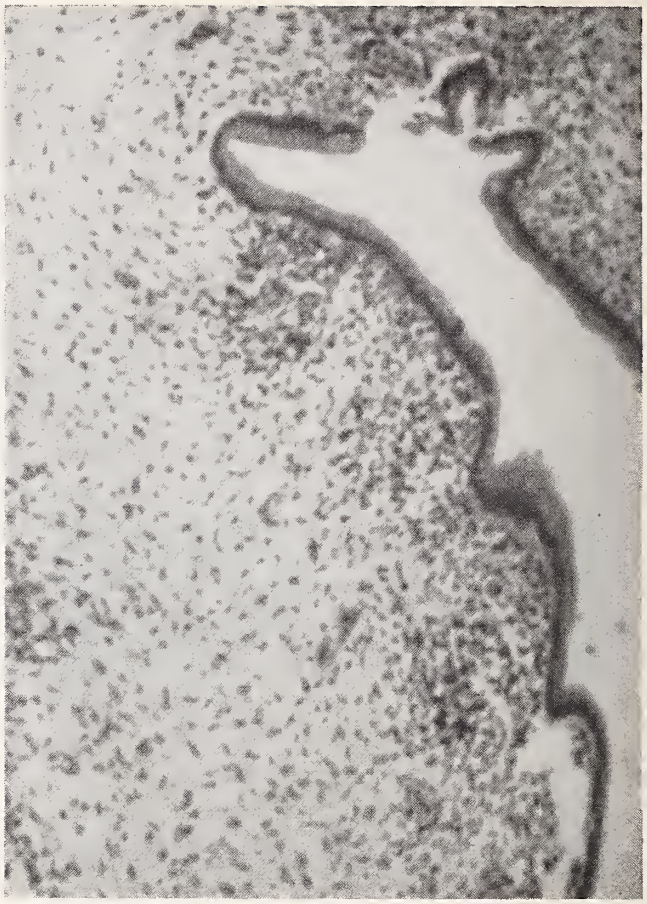


Figure 7. A higher magnification of the tumor, showing the surface layer of columnar epithelium overlying the cellular (cambium) layer, with myxomatous embryonic tissue in the deeper areas.

nous tissue. You will notice that it was invested with an intact layer of bile-duct epithelium, for the most part, and that is characteristic of tumors of this type involving mucosal surfaces. Typically (Figure 7) there is a rather densely cellular zone just beneath the epithelium, and then much of the remainder of the tumor is rather sparsely cellular and quite myxomatous. Within the myxomatous background, predominantly stellate-type cells are seen in some foci, elongated cells of fibroblastic appearance in many areas, and rounded vacuolated cells that suggest fetal adipose tissue in other portions of the neoplasm. There were areas suggestive of embryonic skeletal muscle, but I could find no cross-striated fibers anywhere.

We had, then, an embryonic sarcoma which I think most pathologists would accept as a rhabdomyosarcoma, although no striations were demonstrated in it. The common bile duct is not the commonest location for a tumor of this type. Its highest incidence is in the genital regions of children of both sexes, and also in the head and neck regions in young children of both sexes. They may occur in almost any location in the head and neck area, including the orbit, the nasal passages or pharynx, the paranasal sinuses, within the eustachian tube or other ear structures, or within the soft tissues of the face and neck. Other less common locations are the mediastinum, the retroperitoneum and the extremities. It is a highly malignant tumor, and it is interesting to note that in a number of animal species it can be evoked experimentally by various means, including some oncogenic viruses, carcinogenic chemicals and metallic compounds, particularly nickel. The induced tumors in animals have histologic features and life histories quite similar to those seen in human patients. Other than these experimental data, I have no particular explanation to offer for its occurrence, and certainly no very good explanation for the

peculiar distribution of primary sites in which it can occur in young children.

Dr. Hill: How do these tumors respond to x-rays or anti-tumor drugs?

Dr. Soper: For a number of non-medical reasons radiotherapy was not tried in this child, but by itself it does not have a very good record in terms even of palliation. As for the surgical treatment of sarcoma botryoides, even the most radical ablative procedures carried out early achieve cure rates that are disappointingly low. In its commonest location—the urogenital apparatus of newborn females—the surgical procedure must include pelvic exenteration, with bypasses of both the urinary and intestinal streams in the abdominal wall. The procedure is not very satisfying esthetically, and in addition there are a fairly significant number of recurrences and some early mortalities.

Certain chemotherapeutic agents have introduced some encouraging notes, however, and Dr. Lascari is here to speak on that phase of the subject.

Dr. Andre Lascari, Pediatrics: The drugs that we use for rhabdomyosarcoma are actinomycin and vincristine. We give an initial two-week course of actinomycin, two injections per week, and we continue with weekly vincristine for a period of two months, or perhaps a month and a half, until we know whether we are going to get a response. If after a period of three months we have attained a good response, we give another course of actinomycin, and treat with cytoxan until the patient becomes refractory to it. If the child starts to have regrowth of the tumor, we go back to vincristine until there is no further response to it.

We recently treated a three-year-old child who came in with a mass in the left temporal region. It was resected and was found to be a rhabdomyosarcoma. There was no evidence of disease elsewhere. The patient did well for a year and a half, but then had a metastasis in the right middle lobe of the lung. There was no other evidence of disease at that time. The metastasis was resected, and the child did well for a year. Then we saw him in the fall of 1966, when he came in with a marked respiratory distress that could be heard at a distance. One could see that there was a massive involvement of the right side and a great deal of fluid. There was partial obstruction of the right main-stem bronchus, and radiation was directed to that area. The child received 1,200 r, but showed no response, and we started him on actinomycin and vincristine. After 10 days of that treatment there was a marked decrease in the size of the mass. The patient was active and out playing football as if he had no significant disease. The mass remained approximately unchanged in size for five months, and during that period the child ran around, ate well and led essentially a normal life. Finally he became resistant to the vincristine that we had been giving him weekly during that entire period. We restarted actinomycin but got no response, and also gave cytoxan without getting a response, and the child died.

Some of these tumors do not respond, but occasionally we do achieve a good effect, and can give the patient a period of good healthy life.

Dr. Soper: Are there any final questions? If not, I should like to thank Dr. Hill for a splendid discussion, and close the conference on that note.

SUMMARY OF NECROPSY FINDINGS

1. Embryonic sarcoma, undifferentiated, of common bile duct, with obstruction
2. Chronic bile stasis, liver, with early biliary cirrhosis
3. Hyperplasia, abdominal lymph node.

DR. HILL'S DIAGNOSIS

Botryoid rhabdomyosarcoma.

STUDENTS' DIAGNOSES

1. Choledochal cyst
2. Secondary cholangitis.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

President's Page



It is with mixed emotions that I assume the presidency of the Iowa Medical Society. I am deeply appreciative of the honor that goes with it, an honor that comes to relatively few physicians, and I am acutely conscious of the heavy responsibilities involved.

As we approach the year ahead, I can promise two things. First, I will do the very best job that I am capable of, and second, the things I do will not please one hundred percent of my colleagues. This is inevitably true of the actions of the officers of any medical society, for two reasons. First, physicians are individual thinkers, for if they were not, they would probably not have studied medicine, and second, in the great majority of instances the officers are in a position to be better informed than the membership as a whole on all the issues involved.

I would be the first to defend the right of the membership of this Society to disagree with any action of its officers and policy making bodies, but I beg that before you start a letter writing campaign to other county societies, you fully inform yourselves of the true issues involved.

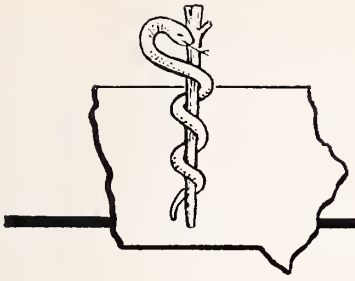
Your Board of Trustees meets once a month and the Executive Council meets once every three months, and any member is welcome to appear before them. Lastly, the president is available by telephone at any time.

Inevitably we shall have some honest differences of opinion, but let us settle our differences with a minimum of disruption to Society function. With every left-wing socialist in the country at our throats, we can ill afford the luxury of a fight among ourselves.

Let us close ranks and present a united front to those who would destroy our free profession.

C. W. Talbot, M.D.

President



Editorials

PRACTICAL POLITICS, LESSON NO. 1

Dear Friend:

I had not intended to discuss this controversial subject at this particular time. However, I want you to know that I do not shun a controversy. On the contrary, I will take a stand on any issue at any time, regardless of how fraught with controversy it may be. You have asked me how I feel about whiskey. Here is how I stand on this question.

If, when you say "whiskey," you mean the Devil's brew, the poison scourge, the bloody monster that defiles innocence, dethrones reason, destroys the home, creates misery and poverty, yea literally takes the bread from the mouths of little children; if you mean the evil drink that topples the Christian man and woman from the pinnacles of righteous living into the bottomless pit of degradation and despair, shame and helplessness and hopelessness, then certainly I am against it with all my power.

But if, when you say "whiskey," you mean the oil of conversation, the philosophic wine, the ale that is consumed when good fellows get together, that puts a song in their hearts and laughter on their lips, and the warm glow of contentment in their eyes; if you mean Christmas cheer; if you mean that stimulating drink that puts the spring in the old gentleman's step on a frosty morning; if you mean that drink that enables a man to magnify his joy, and his happiness, and to forget, if only for a little while, life's great tragedies, and heart-breaks, and sorrows; if you mean that drink the sale of which pours into our treasuries untold millions of dollars, which are used to provide tender care for our little crippled children, our blind, our deaf, our dumb, our pitiful aged and infirm, to build highways, hospitals and schools, then I am in favor of it.

This is my stand, and I will not compromise!

A BILL OF RIGHTS FOR GRANDPARENTS

A recent development on the American scene is the retirement home as a place of residence or for custodial care of the elderly. It has come about as a result of the technologic revolution and the demographic changes which have accompanied the shift from an agricultural economy. An important contributing factor has been the increased longevity that scientific medicine has brought about. Life expectancy at birth, in this country, is now 70 years. Many of us who are no longer young well remember grandparents' living out their lives in our homes while we were growing up, but today such arrangements are unusual.

Surely aging parents are loathe to be a burden on their children or upon society, and most of them prefer to be independent, to occupy separate quarters, to live out their lives as they see fit. The loss of a spouse, the loss of companionship of old friends, the infirmities that accompany growing old, the utter loneliness, the succession of empty, purposeless days offer a bleak future.

Placing the aging parent in a retirement home is not the entire answer. A recent editorial in the JOURNAL OF THE MEDICAL SOCIETY OF NEW JERSEY urges that it is time for someone to write a charter for grandparents: "Let us

not be guilty of neglect of parents. Companionship, affection, comfort and a sense of usefulness are the desiderata of old age. When the grown sons and daughters fail to provide their parents with those things, they are as guilty of neglect as if they starved them. The children's charter is a precious document in the American heritage. It is time for someone to write a charter for grandparents. And these same words may well be engraved on that charter: companionship, affection, comfort and a sense of usefulness. Small rewards for a lifetime of service!"

It is fitting, too, to call attention to the needs of elderly residents of a retirement home or a nursing home for continuing medical care. Too often this aspect of the care of older people is neglected, and no one assumes responsibility for supervising their health. Many of them go for long periods without a physician's seeing them, despite the fact that most of them have chronic and disabling disease. A physician interested in the physical and emotional problems of old age can do much to keep these people on their feet, to improve their health and to dispel their fears and hopelessness.

SURGERY IN CORONARY ARTERY DISEASE

A recent article on the subject of surgery in the treatment of coronary arterial disease is dramatic evidence of a new era in the theory of ischemic heart disease. It deserves the serious attention of the practicing physician who may have patients incapacitated by this common affliction and who could be rehabilitated by the new surgical techniques.

Donald B. Effler, director of thoracic and cardiovascular surgery at the Cleveland Clinic Foundation, has described the experience his group has had with new diagnostic methods in ischemic heart disease and the surgical approach that his group uses in correcting the condition.* He first points out that by definition coronary arterial disease is ischemic heart disease, and that the chief complaint of a patient suffering from it is angina pectoris. Angina pectoris is a reflection of a state of abnormal metabolism during a period of stress when the heart is inadequately perfused. To the surgeon, he says, angina pectoris is analogous to claudication which occurs in peripheral vascular disease. In both conditions the ideal treatment, in its simplest form, is one which will provide increased perfusion by increasing the flow of blood in areas of deficiency.

The Cleveland surgeon draws attention to the fact that the medical treatment of coronary insufficiency varies according to the philosophy of individual physicians, but at its very best there is nothing to prove that medical therapy provides an improved blood supply to the ischemic myocardium. He declares that whatever benefit is derived from medical treatment is not entirely clear, either to the patient or to the interested surgeon. Over a period of many years, various operative procedures for the treatment of ischemic heart disease have been advocated in various medical centers, but according to Dr. Effler, even though the variety of approaches which have been suggested and tried are impressive, the results have not been. He asserts that many of the procedures were poorly conceived, but more importantly, they were offered to patients whose individual needs had not been properly ascertained. "The traditional evaluation of the patient suspected of having coronary arterial disease by 'a good history and physical,' EKG study and cardiologic intuition—one still not abandoned in most medical centers today—leaves much to be desired."

Dr. Effler credits the diagnostic adjunct of "selective coronary arteriography" introduced by Dr. F. Mason Sones, of the Cleveland Clinic, in 1958, as perhaps the most significant advance that has been made in the entire field of coronary arterial disease and our knowledge of it. That technique "roadmaps the coronary arteries of the patient." As of February of this

* Effler, D. B.: Surgery in treatment of coronary arterial disease. WESTCHESTER MEDICAL BULLETIN, 36:11-14, (Feb.) 1968.

year, when Dr. Effler read his paper, almost 11,000 patients had undergone coronary arteriography at the Cleveland Clinic, and from those studies many truths had been learned. From his own exposure to that procedure, Dr. Effler is "convinced that any patient suspected of having coronary arterial disease should be subjected to selective coronary arteriography; otherwise the diagnosis is uncertain and the evaluation incomplete."

Dr. Effler reports that almost 1,600 patients have undergone some form of surgical treatment for coronary arterial disease at the Cleveland Clinic Hospital. The patients were selected, for the most part, on the basis of arteriographic findings, and most of them also had postoperative evaluations by arteriography. He emphasizes that the surgical staff rely on coronary angiographic studies in the selection of patients and in the appraisal of the results of operative treatment.

In the selection of patients for surgical treatment, every patient suspected of having coronary arterial disease is evaluated by customary methods in addition to coronary angiography. If a diagnosis of coronary insufficiency is established, then consideration is given to surgical treatment. Ordinarily, patients can be placed in one of three categories: (1) surgery is not needed; (2) it is too late for surgery; and (3) the patient is in need of surgery. Even though arteriography may show evidence of disease, surgery is usually not recommended if the symptoms are very mild or if there is a good response to the usual medical measures. Patients in whom the heart is irreversibly damaged by infarction or interstitial fibrosis associated with chronic ischemia are poor candidates for surgical revascularization, and are usually excluded from consideration for operative treatment.

According to Dr. Effler, the patient who needs surgery is the one who is symptomatic, in whom correctible complications of myocardial ischemia can be demonstrated, and in whom it can be shown that there is a functional demand for blood in a myocardium that is not beyond salvage. If angina pectoris persists despite medical measures, and arteriography shows a significant occlusion of a main coronary artery, it may reasonably be concluded that the area normally supplied by the vessel has a perfusion deficit, at least under conditions of stress. If, in addition, arteriography reveals collateral blood vessels to the deprived area, it is obvious that a functional demand for blood exists. Also if ventriculography shows a reasonably good ventricular contraction, it may be assumed that the muscle, even though subject to episodes of ischemia, may be salvaged if the blood supply is improved. The author expresses his credo succinctly: "At the present time the surgeon's primary mission is to correct areas of functional demand that may be demonstrated in the left ventricular myocardium. That this can be done in well-selected candidates for surgery has been established beyond question. As experience accumulates, it becomes increasingly clear that the role for surgery in the treatment of coronary arterial disease is increasing steadily."

The author describes three basic approaches for the surgical treatment of coronary arterial disease employed by the Cleveland surgical group:

1. Reconstructive surgery for the heart damaged by a massive myocardial infarction with a resulting large full-thickness scar on the ventricular wall or a ventricular aneurysm. These patients are classified as having acquired heart disease, and they suffer more from impairment of left-ventricular function than from the symptoms of angina pectoris. In these patients, extracorporeal circulation is required, and the large full-thickness scar or ventricular aneurysm is excised, and prosthetic valve replacement is often necessary. Over 150 patients have been subjected to this formidable surgery with an overall mortality rate of less than 10 per cent.

2. Direct coronary-artery surgery is performed on the occasional patient in whom a sharply localized segmental occlusion of a main coronary vessel has been demonstrated. This approach is ordinarily used in localized lesions of the right coronary artery that supplies blood to the posterior aspect of the left ventricle, the papillary muscle and the interventricular septum. In over 130 such procedures the overall hospital mortality has been approximately 13 per cent. During the past six months the surgical team has excised the diseased segment and replaced it with a prosthesis from the saphenous vein. Over 40 patients have under-

gone this operation, and there have been only two postoperative deaths!

3. The indirect revascularization of the myocardium by implantation of either one or both internal mammary arteries. The most common procedure is implantation of the left internal mammary artery in the anterolateral wall of the left ventricle, and then extending the tunnel around the apex of the heart down the diaphragmatic or posterior aspect of the left ventricle. In patients with severe diffuse disease, a bilateral internal-mammary implant is carried out. Internal-mammary implant procedures have been done in over 1,400 patients at the Cleveland Clinic Hospital since April, 1962. Dr. Effler states that with increasing experience and improvement in surgical technique, the hospital mortality for a single implant procedure has been reduced to approximately three per cent; for those undergoing bilateral internal-mammary implant, the hospital mortality varies from eight to 10 per cent.

Follow-up studies nine months to a year after surgery, which included internal-mammary arteriography, demonstrated that over 90 per cent of the implants were patent.

In his discussion, the author states that a new era for the surgical treatment of coronary arterial disease has been established. The era was brought about by the development of the Sones technique of selective coronary arteriography. He asserts: "At the present time it is my firm conviction that any patient suspected of having coronary arterial disease should have selective coronary arteriography." He emphasizes that the Sones technique, properly utilized, can eliminate the diagnosis of coronary disease in the healthy patient who has questionable symptoms and a bothersome EKG. For the patient in whom the diagnosis of coronary atherosclerosis has been established beyond question, the greatest value of arteriography is that it assesses the needs of the individual patient. He finds it difficult to understand why selective coronary angiography has not attracted greater interest and enthusiasm than it has, or why it has been resisted by many qualified cardiologists. He points out, however, that those who are qualified to judge and who become familiar with the procedure soon are convinced that it has a significant place in modern medicine.

The major problem, Dr. Effler asserts, is to recognize the potential for surgical treatment, as well as its limitations. There are many patients with established coronary arterial disease who can get along well with few restrictions, and for those people operative therapy should be deferred. For those whose myocardia are damaged beyond restoration, and in whom an operation is urged on the premise that the patient will die without it, little benefit can be expected. Choosing a patient as a surgical candidate is based upon the clinical evaluation, and in particular on the coronary arteriograms, augmented by an intelligent understanding of what present-day surgical measures can offer. Each patient should be evaluated as an individual, and not as a member of an epidemiologic group. The principle of one treatment for all patients is not applicable in the surgical treatment of coronary arterial disease.

Attend the Annual Meeting

of the

AMERICAN MEDICAL ASSOCIATION

San Francisco, June 16-20

Look for Complete Program in the May 6 *JAMA*

THE DOMAN-DELACATO METHOD

Several articles have appeared in the press and in lay periodicals lauding a controversial program of therapy for brain-damaged children initiated, carried out and promoted by The Institutes for the Achievement of Human Potential, in Philadelphia, more often called the Doman-Delacato method of "patterning." Regional branches have now been established in various cities, including Chicago, Omaha and Kansas City.

Because of the controversial nature of the program and of the favorable publicity given it, the latest in the column by Dr. Walter C. Alvarez in the March 14 issue of the DES MOINES REGISTER, it is essential for physicians to become familiar with the premise upon which the Philadelphia group bases it approach to the management of the brain-damaged child. Sooner or later, doctors will be interrogated by the parents of a handicapped youngster.

The following statements are quoted from the SUMMARY OF CONCEPTS, PROCEDURES AND ORGANIZATION OF THE INSTITUTES FOR THE ACHIEVEMENT OF HUMAN POTENTIAL, 1967 (revised) edition: "The injured brain is never a dead brain; while there may be irrevocably dead cells in the area of injury, there are also cells which are alive but whose function has been depressed, as well as uninjured collateral cells which have not yet become functionally involved. The combined effect of cellular death with cellular functional depression creates a picture which is due to lack or to disruption of neurological organization. It fails to reflect the potential which the brain may achieve by means of stimulation directed toward the living but functionally depressed cells and collateral cells to their full capacity.

"The development of sensory pathways precedes those of corresponding motor tracts. This fact is fundamental to the concepts upon which the Institutes base their treatment of brain injury. Great emphasis is placed on the environment as the source of sensory stimuli involving touch, pressure, temperature, visual, auditory, kinesthetic and proprioceptive sensation to which the individual reacts with a motor (behavioral) response. We have found that environmental stimuli of ordinary intensity and duration are inadequate to elicit responses from the functionally uninvolved and depressed cells of the injured brain. However, with great increase of these stimuli in intensity, frequency and duration, these cells will respond. Therefore, we do not treat eyes or ears, arms or legs, individual muscles or muscle groups. We reach the brain itself by pouring into the afferent sensory system of the individual all of the stimuli normally provided by his environment, but with such intensity and frequency as to draw, ultimately, a response from the corresponding motor systems."

Doman and Delacato emphasize that they treat only brain-injured individuals, and that such a youngster can be differentiated from the child of deficient inheritance whose brain was inadequately endowed genetically, and from the psychotic child who has had no organic injury to the brain but whose behavior varies from mildly aberrant to severely abnormal. By careful history-taking, a neurologic examination and a development profile, the authors say the diagnosis of every child with abnormal behavior can be established on the basis of pathology rather than of symptoms. They assert that the cause in the vast majority of children with behavior problems is brain injury.

In their report on the management of the brain-damaged child contained in a September, 1960, issue of JAMA,* the Philadelphia group outlined the fundamentals of their method as follows:

1. The brain-injured, non-walking child should spend prolonged periods on the floor in the prone position, and be encouraged to crawl or creep in order to utilize uninjured brain areas in physiologic development.

* Doman, R. J., Spitz, E. B., Zuerman, E., Delacato, C. H., and Doman, G.: Children with severe brain injuries; neurologic organization in terms of mobility. JAMA, **174**:257-262, (Sept. 17) 1960.

2. The program of "patterning" reproduces the mobility functions for which injured brain levels are responsible. This is the basic principle involved in the treatment of these children—"a specific pattern of activity which passively imposes on the central nervous system the functional activity that normally is the responsibility of that damaged brain level."

3. A program of sensory stimulation makes the child body-conscious in terms of position sense and proprioception. This is based on the hypothesis that sensory reception is a prerequisite for motor expression.

4. In those patients in whom it is indicated, the program establishes cortical hemispheric dominance through development of consistent unilateral handedness, footedness and eyedness.

5. A breathing program is designed to attain a maximal vital capacity.

The program of treatment, "neurological organization," is taught to the child's parents, and the parents are required to carry it out in their home exactly as it has been prescribed. "Patterning" is carried out four or five times daily, seven days a week, and there must be no deviation from this rigid schedule. Three or four adults must participate at each patterning session, and from 12 to 16 adults must take part daily, and approximately 100 or more each week. Reports in lay periodicals have indicated that as many as 200 adults in a neighborhood have participated regularly in a patterning program for one brain-injured child. The authors make it clear that the responsibility for conducting the therapeutic program is a demanding and difficult one and should not be undertaken lightly. The patient returns to the regional center at intervals of two months.

In their 1967 summary, published by the Institute, the authors assert that they have had an experience involving more than 1,400 brain-injured children, and "the majority of patients show importantly significant improvement." However there are some distinct failures. They are related to four factors that are not commonly encountered:

1. The patient's brain is genetically deficient and the classification of his problem was in error.

2. The parents have been insufficiently impressed with the rationale and the essential intensity of the program.

3. Active and progressive intracranial pathology is present.

4. The brain injury is too severe for achievement of adequate neurologic organization.

The one report published in the medical literature was the initial one in JAMA in which the authors described their program, the hypothesis upon which it was based, and their results in the management of 76 children. Although the program has been greatly expanded, there have been no controlled studies to demonstrate conclusively that whatever improvement that occurs can be ascribed to "neurological organization."

Readers are referred to two successive articles relating to the controversy concerning the Doman-Delacato program in the issue of JAMA for October 30, 1967.† ‡ Both of the articles will help the physician in his effort to acquire an understanding of the program and an objective evaluation of it. Attention is also called to a statement by the American Academy of Pediatrics contained in its NEWSLETTER of December 1, 1965, which concludes with the following statement: "The Academy feels, therefore, that physicians should make their decisions and recommendations for management of the neurologically handicapped child on the basis that there is as yet no firm evidence substantiating the claims made for the Doman-Delacato methods and program. What is needed are well-controlled studies by recognized experts."

That statement was subsequently endorsed by the American Academy of Neurology and the American Academy of Physical Medicine and Rehabilitation.

In his appraisal of any new therapeutic approach to disease, it is the obligation of the physician to be objective but fair. This is true regardless of whether it be a new cancer cure or the management of a neurologic handicap. To the parents of a brain-damaged child, the compulsion to grasp at any straw is understandable. It is incumbent upon the physician

† Freeman, R. D.: Controversy over "patterning" as treatment for brain damage in children. JAMA, **202**:385-388, (Oct. 30) 1967.

‡ Robbins, M. P.: Test of Doman-Delacato rationale with retarded readers. JAMA, **202**:389-393, (Oct. 30) 1967.

to familiarize himself with the pros and cons of the Doman-Delacato program so that he can advise parents intelligently. It should be emphasized that the program is exacting and demanding, that it can disrupt normal family life, and that no one is so prophetic that he can predict the outcome of any program designed to rehabilitate a damaged brain.

THE GENERATION GAP

In these troubled times one hears and reads a great deal about the problems of the adolescent, and one observes behavior, attire and attitudes in many youngsters that are difficult for adults to understand or to cope with.

We are inclined to think that the problem of the adolescent is unique in this era "which tries men's souls." It may or may not be comforting to distressed parents and to a challenged society to learn that the problem is not new. Plato (427-347 B.C.) is said to have exclaimed: "What is happening to our young people? They disrespect their elders. They ignore the laws. They riot in the streets inflamed with wild notions. Their morals are decaying. What is becoming of them?" And Socrates (470-399 B.C.) is said to have declared: "The children now love luxury; they have bad manners and contempt for authority, and show disrespect for their elders. They love chatter in place of exercise. They no longer rise when elders enter the room. They contradict their parents, chatter before company, gobble up dainties at the table, cross their legs and tyranize over their teachers."

Although problems with teenagers are not new, they are greater nowadays because there are so many adolescents. The problems are different in our complex, modern world, with our accelerated communication and transportation, and the concentration of people in urban centers. Technologic advances have produced more leisure for both adults and children, and neither have learned to use it wisely. There are those who insist that the mores have deteriorated in this country, but others insist that each generation of young people behave in a very similar manner.

In a provocative article on the subject entitled "Getting Our Children Through Adolescence," William L. Peltz, a Philadelphia psychiatrist, asserts: "The question is really not whether the parents can survive—of course they can—though sometimes they may agonize and may even wonder whether or not they will. The question, rather, is whether the adolescents can survive—and again my answer is that they can, too—most of them anyway. Some may stumble, and some may flounder along the way, and unfortunately a certain number will succumb in one way or another, but most will not only survive but will reach the levels of adjustment and success which are appropriate for them. And in some cases, as they struggle to find their identities and to become emotionally independent, to reach mature levels of sexuality, to develop principles and values which will be meaningful in living and learning how to earn their living, the levels which they reach are truly remarkable. Obviously, however, there are internal conflicts and external pitfalls along the way which have to be met and coped with."*

Growing up is not easy. The psychologic stresses and pressures are many. The effort to establish one's identity, the conflict between the urge to cling to parents and to emancipate oneself, the inevitable question of sex, the role of religion in one's life, the evolution of a personal code of ideals and values, of purpose—with all of these difficulties is it any wonder that they are confused and puzzled, erratic in their behavior and at times rebellious? To compound the stresses for the adolescent are conflicts with parents, the pressures of peers, the

* Peltz, W. L.: Getting our children through adolescence. J. MED. SOC. NEW JERSEY, 65:57-63, (Feb.) 1968.

competition and the demands of schools and colleges, the inevitability of the draft, the war in Vietnam, disillusionment with this troubled world, the question of a vocation, social and economic inequalities, Black Power, and other questions, problems and stresses which haunt and confuse and challenge their parents.

In adolescence, young people need understanding and support, affection and wise counsel, perhaps more than at any other time in their lives. Preparation for this period of stress must start in the cradle and be nurtured in the warmth and intimacy of a happy family life. There is no substitute for a house where children are loved and belong and are wanted, and where they have the example of wholesome, devoted parents. There must be sound guidelines, limits and restrictions. Discipline should be considered a way of life, and not confused with punishment. It should be remembered that silence and facial expressions and demeanor are often more effective means of communication than words. The individuality of each family member should be respected, and his or her independence encouraged. Somewhere along the way, youngsters must learn that privileges impose responsibilities. Respect for and trust in parents and for authority in general are created by day-in and day-out experience in the years before the stresses of adolescence are reached. Honesty and integrity, tolerance and wholesomeness are forged at a mother's knee. Blessed is the youngster who, in the family setting, learns the satisfactions which come from hard work, a job well done, and giving one's best!

In their relationships with adolescents, I urge physicians and parents to do more *listening* and less *talking*. They will find that course of action—or of inaction—the most effective way to communicate with teenagers—to learn of their conflicts, fears, aspirations and hopes.

I admonish that teenagers should not be sold short. The vast majority are fine, wholesome youngsters who suffer through the stresses of adolescence and turn out to be young adults of whom we are justifiably very proud. Unfortunately, the small minority of young people who are in serious trouble receive the publicity, and it is that group who have given adolescents an unfavorable and undeserved reputation.

In Memoriam

MORRIS BANDY
1924-1968

Morris Bandy, one of my best friends and one of Iowa medicine's best friends, died March 19 following a series of coronary attacks.

In one way or another Morris served the physicians of Iowa for over 17 years. And he served with a loyalty and devotion seldom seen.

He first was allied with Iowa physicians, Iowa Blue Shield and the Iowa Medical Society in 1951 when he became one of the original field representatives of a newly-created Blue Shield Physician Relations Department. Don Taylor, now executive vice-president of the Iowa Medical Society, headed that department at the time, as he then was "on loan" from the Society.

Those were crucial years, the early 50's, full of struggle and strife, and much was at stake for physicians, their patients, the Iowa Medical Society and Blue Shield. Morris never wavered in his efforts to help solve the problems. And in his mind there was never any confusion as to whom he owed his allegiance; the doctors of Iowa, the Iowa Medical Society and Blue Shield were synonymous, and he permitted no legal technicalities to separate his thinking.

After several years Morris left Blue Shield to enter private business, but only for a short while, and he was recalled to serve medicine again, this time as a field secretary for the Iowa Medical Society.

Morris served as field secretary until late in 1963, when he was asked to become the first staff administrator for the newly-formed Iowa Medical Political Action Committee.

Following the tremendous upheaval in politics —the aftermath of the assassination of President Kennedy—Morris worked long and hard in the best interests of Iowa medicine in the political arena until, shortly before the general elections in November, 1964, he suffered his first severe coronary.

Though disabled and unable to work after 1964, Morris, nevertheless, continued to serve the doctors of Iowa in many, many ways—voluntarily and without remuneration—right up to the time of his death.

Morris was 44 years old. He left a wife, six children and hundreds of friends.

Physician friends and others, in recognition of Morris' years of service, have organized the Iowa Medical Foundation Morris Bandy Fund. Contributions, which are tax deductible, may be sent to the Fund at 1001 Grand Avenue, West Des Moines, Iowa 50265.

It was my privilege to know him, to work with him and call him friend. I shall miss him greatly.

—GERALD L. BUCKLES
Field Secretary

University Hospitals DRUG LETTER

Ringer's Lactate Solution

E. E. MASON, M.D.

The chief fluid used originally for intravenous therapy was so-called physiologic (0.9 per cent) saline solution. It was isotonic, but not really physiologic because of the excessive concentration of chloride. Patients often became edematous and developed a hyperchloremic acidosis. If they had bowel anastomoses, the suture lines could become edematous, and obstruction occasionally occurred. It was observed that very little salt was excreted by traumatized or postoperative patients, and that they were often relatively oliguric. It was concluded that saline was poorly tolerated and should not be given to the traumatized patient. Mineralocorticoids were believed the origin of this reaction, and after the isolation of aldosterone it was demonstrated that the output of that hormone was increased in the traumatized patient.

There followed a period during which salt-free fluids were administered, but they were given in excessive amounts. A number of papers reported the occurrence of convulsions and hyponatremia postoperatively. It was concluded that water must also be restricted during the early postoperative period.

Now, a decade or two later, surgeons are again using electrolyte solutions in the traumatized patient. Investigations in animals and in patients, and a review of the older literature have led to a new interpretation of the significance of a low urinary-salt level in traumatized, burned patients, or in those who have bled. The patient is no longer considered intolerant of salt; he probably is actually in need of sodium-containing fluid. In the meantime, it has became evident that the sodium-containing fluid must be truly physiologic. It must have less chloride, a normal amount of bicarbonate-producing anion, and perhaps a normal concentration of calcium and potassium. Lactated Ringer's is such a solution.

The timing of the intensive use of sodium-containing fluids has also become important. An internal loss of extracellular fluid occurs during the early hours after burning, and during the first few hours of hemorrhagic shock and extensive operative trauma. Lactated Ringer's solution is now given as a replacement solution to reestablish a normal, effective extracellular-fluid volume. The solution must be given during or soon after the loss. Signs of fluid overload should not occur, and for that reason the lactated Ringer's should be discontinued as soon as the deficit has been corrected.

Broido, Butcher and Moyer[1] have shown that tissues subjected to mechanical or thermal injury take up large amounts of extracellular fluid, even though those tissues are simply imbedded beneath the skin and are devoid of blood supply. The fluid is sequestered in the extracellular space, and is probably absorbed in collagen, mucopolysaccharides and other polymers as a result of physical chemical changes. Large surface burns have long been known to cause extensive local edema. Extensive use of sodium-containing fluids in the early treatment of burns has been well established. Traumatic shock probably is due to mechanical injury of tissue and the same sequestration of extracellular fluid as is seen in burned patients. Blalock,[2] in 1931, found that a local loss of fluid equal to 4.48 per cent of body weight followed three to six hours' manipulation of the intestines in dogs. Randall and Papper,[3] in 1958, and Shires and Jackson,[4] in 1962, among others,[5] have shown an effective deficit of extracellular fluid following major operations.

The mechanism of injury to tissues is less obvious in hemorrhagic shock. In animals subjected to 150 minutes of standardized hemorrhage plus blood replacement, however, the 50 per cent mortality rate could be reduced appreciably by adding lactated Ringer's solution to the treatment. The mortality was increased by adding 5 per cent glucose solution, dextran or mannitol.[5]

The magnitude of the requirement in these patients is difficult to assess, but it ranges from 4 to 8 mEq. of sodium per kilogram of lean body mass. In a lean man weighing 75 Kg., this implies a need for two to four liters of lactated Ringer's, in addition to the replacement of blood loss, in treating hemorrhagic shock or during an extensive operative procedure. The actual amount depends upon the severity of the insult. The lactated Ringer's solution should be used early, and at a rate of one liter per hour until blood is available and until the first two liters of lactated Ringer's

Dr. Mason is a professor of surgery at the U. of I. College of Medicine. This article appeared initially in the July, 1967, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. Materials from DRUG LETTER are reprinted here at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors.

has been given. The pulse, blood pressure, central venous pressure, urine output, skin color and capillary-refill time help in determining the adequacy of treatment. Even in the traumatized patient, adequate restoration of effective extracellular fluid is followed by excretion of any excess intravenous sodium, provided the kidneys are undamaged.

Lactated Ringer's solution has become popular wherever an expansion of extracellular fluid is required, for it has the proper ratio of chloride and bicarbonate-producing anions. In many instances of extracellular-fluid replacement, isotonic (0.9 per cent) saline and M/6 sodium lactate solutions can be used in proportions of four parts and one part, perhaps with potassium chloride added. Such solutions may be modified in proportions and additions to fit the patient's requirements. The blind and general use of any eponymic solution without consideration for its composition or of the patient's need is poor practice.

Lactated Ringer's *should not* be used for replacement of acid gastric juice where saline has the more appropriate excess of chloride anion. Lactated Ringer's *may not* have sufficient potassium for some patients, and may have too much for others. Lactated Ringer's solution *should not* be used to supply metabolic fluids as replacement of urine and insensible loss from skin and lungs. Non-electrolyte solutions such as 5 per cent glucose are required for this.

The quantity of lactated Ringer's solution used in the University Hospitals now approximates 2,600 liters per month. The recent increase in requests for it suggests indiscriminate and inappropriate use. There are other questions regarding the basis for its use. One of the outstanding ones is related to the pH requirement of Ringer's lactate. The lactated Ringer's solution used in Barnes Hospital, St. Louis, has a pH around 8.0. Our current stock solution has a lower pH. No one has confirmed or refuted the conclusion of Moyer, Butcher, *et al.* that a pH of 8.0 is important.

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Benefit Honoring Dr. W. D. Paul

To honor William D. Paul, M.D., professor of physical medicine at the U. of I., who will become professor emeritus on July 1, the Special Projects Committee of the Iowa Chapter Arthritis Foundation will sponsor The Benefit Jewelled Ball, on May 25, at the Hotel Fort Des Moines, in Des Moines.

Dr. Paul who has been internationally acclaimed for his research in rheumatology has been on the staff of the College of Medicine, University of Iowa Hospitals, since 1930.

Proceeds from the Ball will be used to help establish an electronmicroscope laboratory at the University for the scientific study of arthritis and metabolic diseases. Upon completion, it will be dedicated as the W. D. Paul, M.D. EM Laboratory.

Mrs. William R. Prouty of Des Moines, the general chairman, has issued an invitation to all members of the Iowa Medical Society. Rare Jewels of the World by Harry Winston, Inc. of New York, will be featured at the Ball. Tickets for the ball are $50.00 per couple, and the entire cost is deductible for tax purposes. Donations may be sent and tickets secured by writing Mrs. Prouty at 914 Locust Street, Des Moines 50309. Reservations are limited.

In addition to citizens of Iowa, several notables in the medical profession from various parts of the United States will attend the ball to honor Dr. Paul for his 38 years of dedicated arthritis research.



Dr. W. D. Paul

THE JOURNAL *Book Shelf*



BOOK REVIEWS

PATHOLOGY OF INFANCY AND CHILDHOOD, by *John M. Kissane*, M.D., and *Margaret G. Smith*, M.D. (St. Louis, C. V. Mosby Company, 1967. $39.50).

This is an excellent book, indeed! Its purpose, as its title implies, is to emphasize the pathologic features of disease in childhood, in contrast to that of the usual textbooks of pediatrics which of necessity emphasize the clinical and therapeutic aspects of disease.

It is a large volume (1082 pages including index) with print sufficiently large to make reading easy. There are 703 illustrations of gross and microscopic pathologic specimens which augment the written descriptions considerably. The book is divided into sixteen sections, the first two of which are concerned with growth and development and metabolic diseases, and (Section II) infectious diseases. The remaining sections are divided among the various organ systems. Section III, for instance, considers the alimentary tract from mouth to anus, Section V the circulatory system and Section VI the respiratory system.

Where appropriate, the embryology and development of the components of the organ systems under discussion are presented first, and they are followed by a correlated description of disease processes and the pathologies they produce. An extensive list of references is given at the end of each section.

Unlike many of the modern textbooks in which a number of authors have contributed chapters, the present volume appears to be almost solely the product of the authors' own efforts—obviously a tremendous writing task. They did seek help with two of the sections, those concerned with the nervous and locomotor systems.

Both of the authors are pathologists at the Washington University School of Medicine, at Barnes and affiliated Hospitals and at the Children's Hospital in St. Louis, Missouri. Association with those outstanding institutions has given the authors access to a wide variety of pediatric pathology upon which to base their writings.

In the preface, the authors suggest their book will be useful as a "reference work for medical students and postgraduate trainees in both pathology and pediatrics, and as a supplement to the personal experiences of established general pathologists and pediatricians. Both family physicians and the practitioners of various subspecialties concerned with the treatment of infants and children will also find it useful." This reviewer is in full agreement with that assessment.—*Lee Forrest Hill*, M.D.

SURGICAL APPROACHES TO THE NECK, CERVICAL SPINE AND UPPER EXTREMITY, by *Emanuel B. Kaplan*, M.D. (Philadelphia, W. B. Saunders Company, 1966. $11.50).

This is not an atlas of surgical techniques or a compendium of illustrations. There are illustrations, but most of the text is descriptive. The volume emphasizes anatomical detail and relationships, for these are concerned in the surgical approach.

Those performing surgery on the neck, cervical spine and upper extremity—and they include general surgeons, orthopedic surgeons and neurosurgeons—will find much concise detail and practical information here. Others can use the book profitably for review and reference. It is a useful volume.—*John T. Bakody*, M.D.

BOOKS RECEIVED

PERSPECTIVES IN LEUKEMIA, ed. by *William Dameshek*, M.D., and *Ray M. Dutcher*, Ph.D. (New York, Grune & Stratton, Inc., 1968, $12.50).

SURGERY OF THE AGED AND DEBILITATED PATIENT, ed. by *John H. Powers*, M.D. (Philadelphia, W. B. Saunders Company, 1968, $19.00).

PHYSICAL STANDARDS IN WORLD WAR II prepared and published under the direction of Lieutenant General *Leonard D. Heaton*, The Surgeon General, United States Army, editor-in-chief, Colonel *Robert S. Anderson*, MC, USA. (Washington, D. C., Superintendent of Documents, Government Printing Office, $3.00).

CELL DIFFERENTIATION, Ciba Foundation. (Boston, Little, Brown and Company, 1968, $12.00).

THE BALKAN NEPHROPATHY, Ciba Foundation. (Boston, Little, Brown and Company, 1968, $3.50).

COMMUNICATION IN SCIENCE, Ciba Foundation. (Boston, Little, Brown and Company, 1968, $12.50).

HEALTH OF MANKIND, Ciba Foundation. (Boston, Little, Brown and Company, 1968, $12.00).

HEREDITARY DISORDERS OF ERYTHROCYTE METABOLISM, ed. by *Ernest Beutler*, M.D. (New York, Grune & Stratton, Inc., 1968, $9.00).

Attend the Annual Meeting
of the
AMERICAN MEDICAL ASSOCIATION
San Francisco, June 16-20
See Complete Program in the May 6 *JAMA*

Iowa Association of Medical Assistants

Take It for What It's Worth

Do you really take your membership in the Iowa Association of Medical Assistants for what it is worth? Or do you belong because it seems the thing to do, or just because you are a "joiner"?

These are questions each of us should ask herself when she pays her dues: (A) What are the purposes and goals of the organization? (B) Are those goals being accomplished? (C) Am I fulfilling my obligations as a member? (D) Is the Association (or my chapter of it) being run by a clique? (E) What is the structure of the Association? There are other questions that each of us might add to the list, but perhaps the most important one is, "Shall I accept an appointment to a committee, or serve as an officer, and if I do, how can I best do my job?"

From this writer's standpoint, the first thing to do is to learn the structure of the Association. What are its aims? In the case of the Medical Assistants, the single aim is education for self-improvement. There are many avenues that one can take toward the accomplishment of that purpose, and choosing the best routes and enlisting the necessary teachers—perhaps I should have said "guides" in order to continue with my chosen metaphor—are tasks that require dedicated effort from many people. When, as a chapter or an Association, we ask assistance from leaders in the allied professions, we should demonstrate our sincerity by making the most of the instruction they provide us.

Once a member understands the goals of the organization, she should investigate its mechanics —she should learn how the Association is set up, what its chain of command is, how its finances are handled, what philanthropic activities it participates in, what civic programs it offers and, most important, what its governing rules or by-laws are.

All of us have heard the complaint: "This outfit is run by a clique!" If so, perhaps the reason is that only a very few members are willing to do the work. Have you accepted an opportunity to serve the Association? The person who seems to be one of the "clique" is deriving much more than average from her membership, for she is participating actively; she has a feeling of belonging, of being needed and of contributing. No matter how small the assignment, nothing feeds the ego better than a compliment on a job well done. So ask yourself, "What do I do for the Association?" We get about as much out of any human institution as we are willing to put into it.

When you have paid your dues, you have actually qualified yourself only to sit in the audience. Buying a ticket to a show admits you to the theater, and of course you have made a step in the right direction. You have become entitled to witness the action and hear the lines. But how far preferable it would be to make an extra effort—to join the cast and take your place on the stage!

With your membership come the privileges of voting, of voicing your opinions and of becoming a leader. Become informed, so that you can exercise those rights! There are opportunities for all of us to become leaders—leaders in various aspects of the Association's work. In order to function properly, each chapter must have leaders—leaders who show the qualities of statesmanship.

Experience is a most important ingredient for leadership. Therefore it behooves each member to accept appointment to a committee—first, just as a member, but later as chairman. Progress from committee membership to committee chairmanship to officership provides a background for leadership. Take the nomination and election processes seriously. Make certain that your chapter puts its best foot forward. If you have a capacity for leadership, let it be recognized first by attending meetings regularly, then by accepting work assignments, voting judiciously and understanding what goes on.

Membership in the Association of Medical Assistants means belonging to a professional organization—one that has been recognized by the medical profession and commended for its efforts at providing additional training for all medical assistants. Each local or county chapter is a mechanism through which the policies of the state and national organizations are translated into action. The Iowa Association serves as the coordinator for the county chapters. It collects information on effective ideas for programs, and it speaks for the Iowa members at the national level.

The National Association, the AAMA, does things for the members that they could not hope to do as individuals. It is providing a challenge to medical assistants to reach certification, and it provides them excellent public relations.

Now let me ask you, "Are you taking it for what it's worth?—your membership, I mean." As a new year starts for IAMA, ask yourself, "What can I do for the chapter, and for myself?"

—Marian Little

STATE DEPARTMENT OF HEALTH



ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Maternity Care in Iowa

Change seems to be the order of the day. The number of births in Iowa has declined markedly during the past few years. Maternity patients remain in the hospital for a shorter time. Finding qualified professional people to deliver health care to mothers and children presents a problem—and also a challenge.

With the changes and problems, it is well to consider what an ideal maternity and newborn department of a hospital could be—even a very small one. It has been said that "where there is no vision the people perish." It would be desirable—

. . . IF all mothers received the kind of care recommended by the MANUAL OF STANDARDS IN OBSTETRIC-GYNECOLOGY PRACTICE, SECOND EDITION, published in April, 1965, by the American College of Obstetricians and Gynecologists, 79 West Monroe Street, Chicago, Illinois 60603.

. . . IF all newborn infants received the kind of care recommended in STANDARDS AND RECOMMENDATIONS FOR HOSPITAL CARE OF NEWBORN INFANTS, published by the American Academy of Pediatrics, Inc., 1801 Hinman Avenue, Evanston, Illinois 60204.

. . . IF time and communications between physicians, nurses and hospital administrators would permit joint development of policies for care of the maternity patient and newborn infant in each hospital.

. . . IF maternity departments in all hospitals were flexible enough to meet the rapidly changing census needs.

. . . IF all hospitals had continuing-education programs for their personnel, so that patient-care needs were analyzed periodically and changes made to meet those needs.

. . . IF the maternity and newborn department nurses could work only in that department, and were especially trained in maternity and newborn care.

. . . IF all members of the health team were interested in family-centered maternity care.

We believe that care of mothers and babies in Iowa is generally good, but that only by continued effort can it be kept so. We also believe that continuous evaluation of practices and facilities is necessary for good patient care.

To maintain—and improve—the status of maternity care, there are some basic ideas that must be accepted and implemented. The first is adequate communications. It is important that physicians, nurses, and hospital administrators develop a freedom to discuss problems and plan for the kind of care young families need and want. It is good practice to attempt periodic evaluations of patient care. Standards such as those produced by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists provide a base for evaluation.

Physical facilities provided for the mother and the newborn are important. The maternity department should be isolated from the general hospital.

Newborn nurseries should be small, housing no more than twelve or, preferably, eight infants. Convenient handwashing facilities, equipped with soap and paper towels, are basic for good patient care. Bassinettes should have storage space for a 24-hour supply of linen and other materials necessary for care of infants.

Single labor rooms are desirable. The delivery rooms should be similar in design to the operating rooms. The equipment for the labor and delivery rooms should be as carefully chosen as that in the operating rooms.

Today, many hospitals have more postpartum beds than are needed. If a change in the use of these beds is being considered, the State Department of Health should be consulted.

Patient care policies and procedures must be tailored to fit the individual hospital. As medical care changes, nursing care changes, too.

Each hospital, large or small, can have a committee or a single member of the medical staff responsible for reviewing and approving procedures and policies for operation of the maternity department. In some hospitals the nursing department maintains a nursing-practice committee. It meets regularly, and reviews and evaluates nursing care practices in the light of changes in medical practice, hospital policy, etc. It is recommended that each hospital have such a committee.

The State Department of Health has prepared guidelines for maternity nursing. Nursing consultation on the evaluation and development of ma-

ternity care is also available from the Department.

Adequate care of the maternity patient involves other departments such as laboratory, x-ray, housekeeping, and dietary. Communications in today's hospital are indeed complex, and more study and an awareness of the interdependence of each department on every other are needed.

Good patient care demands the establishment of priorities for the various levels of nursing care. The professional nurse should give direct patient care when the mother is in active labor, during delivery and during the first few hours of the postpartum period. The newborn infant also should be cared for by a professional nurse during his first few hours of life.

Many hospitals have difficulty in findings nurses experienced or especially trained to assume responsibility for supervising the maternity department. The State Department of Health has developed a plan to provide nurses with short-term planned observation and work experience in a well organized maternity department. Hospitals interested in sending a nurse for such an experience should get in touch with the Department.

Family-centered maternity care is essentially good responsible medical and nursing care, the plus factor being a recognition of the family's need for knowledge of the childbirth process and of child rearing. Prenatal classes do much to reduce fear and prepare women for the childbirth process. The State Department of Health can offer consultation and materials to communities wishing to develop this program.

Good personnel policies in hospitals will go far in protecting patients from infections. These policies include a realistic health-care program and sick-leave policies. The employee should be encouraged to report infections, and treatment should be assured. This is an important aspect of good patient care.

A planned orientation program at the start of employment, and a continuing education program for every employee are "musts" in this rapidly changing world. Doctors, nurses and hospital administrators must have good communications to plan effective and useful programs for those involved in patient care.

Continuous evaluation of medical and nursing care of maternity patients and of newborn infants is essential to the maintenance and extension of proper care to families in Iowa.

Pamphlet for Emphysema Patients

What it means to have emphysema is the subject of a new publication just released by the National Center for Chronic Disease Control of the USPHS. It is a reprint of an award-winning five-part series written by Mr. Frank E. Carey, an Associated Press science writer, and carried by the AP in September, 1966. It takes the reader into medical centers for the care and rehabilitation of emphysema patients, and describes the way of life dictated by their breathing problems.

The booklet presents what can be done in rehabilitating those seriously crippled by the disease. Special attention is given to steps which the patient can use to clear his airway and retrain his breathing muscles.

Single copies of "Emphysema, the Battle to Breathe" (PHS Publication No. 1715) are available free from the USPHS, or larger numbers can be bought for $26.25 per hundred from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Minimum Standards for Nursing Homes Regarding

Drug Storage and Handling

Pursuant to Sections 135.11 (17) and 135C.14 of the Code of Iowa (1966), the rules and regulations relating to drug storage and handling in nursing homes, as amended, are as follows:

1. A cabinet with a lock shall be provided and used for the storage of all drugs, solutions and prescriptions. There shall be some type of work counter in direct proximity to the cabinet, and both cabinet and counter shall be well lighted. It is recommended that running water be in close proximity to medicine storage.

2. Drug storage shall be located in an area that is convenient to nursing service. A bathroom is not a satisfactory location for drug storage.

3. The storage cabinet shall be kept locked, and the person directly responsible for issuing medicines shall keep the key in her possession.

4. A special locked box shall be kept within the cabinet for the safekeeping of all narcotics. Records shall be kept of all narcotics that are received and dispensed.

5. Biologicals and other medications requiring refrigeration shall be kept in the refrigerator. In small homes the kitchen refrigerator may be used if the medications are plainly labeled with the patient's name and room number, and are stored in a separate compartment of the refrigerator.

6. No medicines prescribed for one patient may be administered to or allowed in the possession of another patient.

7. Drug labeling: (1) All medications prescribed by a physician shall be labeled. The label of each patient's individual medication container shall clearly indicate the patient's name, physician's name, prescription number, name and strength of drug, dosage, and date of issue, and the name, address and telephone number of the pharmacy issuing the drug. (2) Medication containers having soiled, damaged, illegible or makeshift labels shall be returned to the issuing pharmacist or pharmacy for

relabeling or disposal. Medication containers having no labels shall be destroyed. (3) The medications of each patient shall be kept or stored in the originally received containers.

8. When a patient is discharged or leaves the home, the unused prescription shall be sent with him or a responsible agent. Unused prescription drugs prescribed for patients who have deceased shall be destroyed by the responsible nurse, or returned to the dispensing pharmacist for destruction. The State Board of Pharmacy Examiners, State Capitol Building, Des Moines, Iowa, shall be notified for instructions concerning disposal of unused narcotics prescribed for patients who have deceased.

9. Prescriptions shall not be automatically refilled; they can only be refilled with the permission of the attending physician. Bulk supplies of prescription drugs shall not be kept in a nursing home unless a licensed pharmacy is established in the nursing home under the direct supervision and control of a pharmacist.

10. A qualified nurse or a responsible person shall administer all medications. The nurse shall be held responsible for all medications. The person assigned responsibility for medication administration must complete the procedure by personally preparing a unit dose, administering it and recording the medication given. Where the unit dose is prepared by a pharmacist, the medication shall be observed personally by the individual responsible for administering medications. Any unusual patient reaction shall be reported to the physician at once.

11. No patient shall be allowed to keep in his possession any medications unless the attending physician signifies in writing on the patient's medical record that the patient is mentally and physically capable of handling his medicines.

12. No medications, prescriptions included, shall be administered to a patient without the written order signed by the attending physician. Medications not specifically limited as to time or number of doses when ordered shall be automatically stopped in accordance with a written policy developed by the nursing home and the attending physician.

13. A pharmacy operating in connection with a nursing home shall comply with the provisions of the pharmacy law requiring registration of pharmacies, and the regulations of the Iowa State Board of Pharmacy Examiners.

14. A nursing home may provide an emergency medication tray containing prescription drugs. If such emergency tray is provided, there shall be compliance with the following requirements: (1) The prescription drugs must be prescribed by physicians who provide emergency service to the nursing home, and the non-prescription contents must be approved by them. (2) The tray shall contain a list of its contents, including quantities, on the outside cover and within the box. (3) The tray shall be sealed with a seal which may be opened when the drugs are required in an emergency or for inspection. (4) A permanent record shall be kept of each time the tray is utilized. (5) The tray shall be inspected by a pharmacist after each time the tray is used, and not less frequently than every three months, to determine the stability of items in the tray, and to replace any items that have been removed. A permanent record shall be kept of inspections by a pharmacist.

Morbidity Report for Month of March, 1968

Diseases	1968 Mar.	1968 Feb.	1967 Mar.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	969	649	1361	For the State
Typhoid fever	0	0	2	
Smallpox	0	0	0	
Measles	2	7	126	Polk
Whooping Cough	18	8	41	Cerro Gordo, Keokuk, Louisa, Polk
Brucellosis	5	0	4	
Chickenpox	1250	882	1017	For the State
Meningococcal meningitis	0	3	3	
Mumps	2627	1983	515	For the State
Poliomyelitis	0	0	0	
Infectious hepatitis	70	65	41	Jackson, Plymouth, Polk, Tama
Rabies in Animals	9	12	3	For the State
Malaria (Imported)	3	2	1	Cerro Gordo, Linn, Story
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	18	11	27	For the State
Syphilis	74	58	53	For the State
Gonorrhea	352	262	271	For the State
Histoplasmosis	3	1	5	Cero Gordo, Linn, Marion
Food intoxication	0	0	0	
Meningitis (type unspecified)	1	0	6	Muscatine
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	7	4	2	Johnson, Polk, Pottawattamie
Tetanus	0	0	0	
Chancroid	0	1	0	
Encephalitis (type unspecified)	0	0	0	
H. influenzal meningitis	0	2	2	
Amebiasis	2	0	2	Dallas
Shigellosis	6	4	2	Blackhawk, Polk
Influenza	313	2857	0	For the State

Woman's Auxiliary News

Inaugural Speech

Mrs. James F. Bishop

It is with considerable humility that I undertake the office so lately vacated by a truly distinguished president, Elaine Olsen. We all know her great dedication to our common task and the long, exhausting hours she has spent for us. To quote an old adage of the entertainment world, "It is hard to follow an act like that!"

You may well find yourselves in a situation similar to that of a planeload of passengers bound for Europe. All were aboard and in their seats when the soft music from the loudspeakers stopped and a voice was heard, "Ladies and gentlemen," it said, "welcome aboard. This is a recorded message. You are privileged to take part in a great new scientific achievement. This great aircraft has no pilot, copilot, or engineer. It will operate entirely by computer. At a signal from the control tower, the great jet engines will roar into life, the plane will rush down the runway and lift off into the sky, all under the command of the computer. Navigational radios, connected to the automatic pilot, will guide you exactly to the airport in London. . . . There, on signal from the control tower, the computer will guide the plane unerringly to a gentle landing, taxi it to the terminal and open the doors. Throughout this history-making journey, there will be no human in the cockpit. Are you worried? Don't be. You will be entirely in the hands of modern science, and nothing can . . . nothing can go wrong . . . nothing can go wrong . . . NOTHING CAN GO WRONG!"

Unfortunately, we are not computerized in our Auxiliary and we have great need for devoted human endeavor, yours and mine. Our endeavors should, I think, find expression in three general ways. First, MEMBERSHIP. The wife of every member of the Iowa Medical Society is eligible for Auxiliary membership, whether her county is organized or not. In fact, some of our most interested and enthusiastic workers are members-at-large. Every medical wife should be invited to join us and be assured of her welcome to our sorority. Any county with an organized medical society but without an organized Auxiliary is a target for our efforts. And let us always remember that the wives whose doctor husbands have passed on can still be treasured Auxiliary members, and we want to be part of their lives. As our membership grows, so will our strength grow, and so will our opportunities for service.

This leads me logically to our second field of endeavor—community service. We have been called upon many times, by local medical societies, to help with projects of theirs—perhaps assisting in mass-immunization programs or chauffeuring and serving as hostesses at medical meetings. These things we are glad to do, but they do not come often enough to keep us really involved. Many things that need doing every day could and should concern us. There are medicine samples to be picked up in offices for shipment where they are needed, old shirts to be gathered up to make Johnny coats, leper bandages to be knit, Homemaker services to be supported, people to be transported for therapy, encouragement and help to be given those interested in health careers, Volunteer Friendly Visits to be made to the homebound, or participation in the work of one or all of the listed committees. Let's become informed and active with the Auxiliary's Legislative Committee and with the



Mrs. James F. Bishop

political parties of our choice. Perhaps each local Auxiliary should appoint an *ad hoc* committee to study needs in its own community, and should take on jobs that badly need doing.

The third area of endeavor is the support of organized medicine. The winds of social change that are blowing across our country have not spared medicine. No longer may a physician devote all his time and his energies to caring for the ill and the injured. He must watch carefully the changes swirling about him, so he can add to and support those which are good, and oppose those which are not. Ours is a society of pressures, and the direction it takes is the sum of the pressures exerted against it. Laborers, lawyers, engineers, governmental bureaus, manufacturers, pharmacists and all the rest gather themselves into organizations so that their collective voices will be louder than those of any individual. Medicine must do likewise so that its opinions and sentiments may be heard above the general clamor. An alert, informed Auxiliary member can take part in spreading medicine's views into all the various lay groups in which she may find herself. She can counter the arguments which threaten the proper practice of medicine, and can intelligently defend medicine against its detractors.

It is a great honor you have given me in making me your president, and I promise you the full measure of my energies and, for whatever they are worth, my talents. All I ask in return is your energies and your talents. Then "NOTHING CAN GO WRONG." It is not really important who is president for one year or another. Presidents come and go. What is important is that the Auxiliary shall endure; that it shall continue to help bear the proud banner of medicine; that it shall seek an identity of its own in service to its community, helping to do those many things that need to be done. The State Auxiliary must find its strength in its grass roots, the medical society, organized counties and members-at-large, if it is to grow and fulfill its promise. The Auxiliary, like any other organization, can be as much or as little as its members want to make it. I hope we choose to make it much, for the satisfaction from a necessary task well done is a good and ample reward.

The BIBLE tells us: "The joyfulness of a man prolongeth his days." From this I have chosen our 1968-1969 theme: "The Joy of Living and Giving" —actually, "Know the Joy of Living and Giving."

Deaths

Mrs. Bert A. Bowers, 86, Sioux City, who recently died was one of the oldest members of Sioux Med-dames. She was a charter member, the first secretary and a past-president of that organization, and until she died she was an interested, active member of it. Dr. Bert Bowers died in 1950.

11,039 Miles Later

Happy, involved members working to better their individual communities both in health activities and in health attitudes have been my goal this year. By focusing our attention on the value that our projects can actually have for the people in our communities, we hope to plan with other groups and thus, through united efforts, to produce a healthier and better-educated population.

Eleven thousand thirty-nine miles and 92 days away from home have left me behind in my housekeeping and with my family ties badly frayed, but I have gained so many new friends and had so many valuable and enjoyable experiences that I do not know how to express the gratitude within my heart to all who shared part of their lives with me this past year. The members I was able to visit within the 28 counties where there are organized Auxiliaries were the most rewarding part of my being president. I am sure I would make a much improved president now, for I have come to know you as you are. Each group I visited are more than numbers, names and addresses. You are real people with real interests, projects, and problems. At those shared meetings in your own areas, I hope to have carried a message of friendship, a mutual understanding of all doctors' wives and their families, and the renewal of the conviction that Auxiliaries exist to serve the community, under the direction of our medical societies. Iowa Auxiliaries are planning more and more with the schools, voluntary health agencies, churches, and related professional groups. I feel that close, personal and informal contacts are most important in keeping our Auxiliary active, informed and enthusiastic.

Missouri, Nebraska, Wisconsin, and Illinois state conventions provided learning experiences for your president, and I have tried to incorporate some of their ideas in our year's program and in this convention. Each of these states have, therefore, contributed to this year's story of progress in Iowa.

The national convention in Atlantic City and the national conference and workshop in Chicago helped to provide us with the materials and information to carry out our attempts to better community health in our state.

During the year we have had four Board of Directors meetings, two annual meeting planning sessions, one executive committee meeting, three by-laws meetings (following preliminary meetings of the appropriate committee) and one statewide workshop for county officers.

Besides the county meetings that I attended, I was privileged

1. to install the Polk and Pottawattamie County Auxiliary officers
2. to help man the State Medical Society's State Fair Health Booth

3. to participate in the WASAMA Welcoming Tea at Iowa City
4. to serve at a Health Careers Tea in Boone
5. to address the senior medical students and their wives, in Iowa City
6. to attend the State Pharmaceutical Wives' convention

Members across the state have expressed their relief at the less frequent mailings and their appreciation for DIRECT LINE, MD'S WIFE, and the AUXILIARY NEWS. I am expressing these thoughts for them and hoping that more of our state chairmen use the AUXILIARY NEWS as their means of communication to the membership, for it is being read and used as a reference.

This year we designated ourselves as doctors' wives as we worked on the many worthwhile projects in our Auxiliaries and our communities, and let the world know that our Medical Auxiliary is a very special organization whose members' personal lives are tied up with organized medicine, and that medical relations are part of our daily living. The many goals we have attained were accomplished because of an alert and dedicated membership, working in the constant support of a progressive minded board.

My thanks to all of you for allowing me to serve as your state president. It has been a pleasant privilege.

In spite of my "Gavel Gabble" all year, I have travelled 11,039 Iowa miles without a gavel. I have now purchased a new gavel for the president's use.

ELAINE OLSEN (MRS. MAX E.)

Around the Hawkeye State

Black Hawk

Thirty-five members of the Black Hawk County Medical Auxiliary and their guests attended the March meeting at the home of Mrs. Edward Sitz. Mrs. Dwight Conklin, Republican representative from Black Hawk County in the General Assembly of Iowa, and president of the Auxiliary, spoke on the topic, "Just What the Doctor Ordered."

The annual arts and crafts sale sponsored jointly by the Black Hawk County Medical Auxiliary and the Iowa Easter Seal Society was held on March 28, 29, and 30, from 9:30 a.m. to 5:00 p.m., in the Men's Department of Black's Department Store. The handmade items for sale included needlework, rugs, leather articles, jewelry, children's toys, clothing, tea towels, pillow cases, and other useful and decorative items. Mrs. Fred Dick was the chairman of the event.

Dubuque

The Dubuque County Medical Auxiliary held its March meeting at Dubuque Golf and Country Club, and heard Mrs. Tom Cody, Mrs. E. W. Zwack, and Mrs. Frank Hickey discuss "Needs of the Retarded in Dubuque County." Mrs. Max E. Olsen, of Minden, president of the Iowa Medical Society's Woman's Auxiliary, was the guest at that dinner meeting.

Buchanan

The Woman's Auxiliary to the Buchanan County Medical Society sponsored its first benefit ball on April 20 at the Gayla Ballroom. Proceeds from the dinner-dance went to defray the cost of equipping a room at the People's Memorial Hospital, now under construction. The Bill Miller orchestra, from Waterloo, provided the music. Mrs. John Mochal and Mrs. Philip Tenney were co-chairmen, and the committee members were: Mmes. Richard Moore, finance; William Stone, program; John Flage, food; Bruce Ambler, decorations; and Richard Meyers, publicity.

Senior Medical Day at Iowa City—1968

Mrs. Max E. Olsen

It won't be too long before many of you will be packing suitcases heading to an internship and moving into new quarters, new careers, and a new set of conditions—with special problems and advantages. Most of you face the possibility (if you have not already had it) of two years' military service before you establish your practices. After the past few decades, in which we have experienced the profound effects of the science explosion, you have a keen sense of sureness about new tools and new skills that physicians before you could not have. Yet at the same time, you are aware of emerging into an unsettled era in which far-ranging social changes and an increasing governmental role in all aspects of medicine will produce a sharp alteration in the status of the physician. Now, some 60 per cent of the medical students are married, and just may have families by graduation time. Thus I am going to aim some of my remarks to the feminine portion of the audience. Perhaps we can have a "cram" short course in "How to Be a Doctor's Wife by Really Trying." We all know that just as physicians individually and collectively must maintain a high level of ethical conduct in their relationship with patients, colleagues, members of allied professions and the public, so must the physicians' wives, individually and collectively, maintain a nearly identical code of conduct. But how??

First of all, no one is going to tell you how to be a doctor's wife. We get lots of sympathy, but no instruction. If we marry when our fiances are in medical school, we shall have accumulated a liberal education in the art by the time they graduate and we can add to it during ensuing periods of internship, residency, military service and early practice.

Next, cultivate your own interests. The average wife looks with envy at other doctors' wives who are themselves nurses, medical students or doctors, and thus initiated into the mystery of science and its self-consuming exhaustion. She could join a club where the members merely entertain each other, but active participation and leadership in community affairs are essential to good citizenship and should be our primary concern. We hope you will become a part of the Woman's Auxiliary to the Iowa Medical Society. In this unique organization, we are fortunate in the single simple bond which ties us together as in no other group to which we can belong. We are wives of physicians, and we work in behalf of organized medicine and like to think we are one of its most valuable allies.

Learning to assist patients in locating the doctor in an emergency is another obligation of the physician's wife, and believe me, it is not easy to find a good way of explaining that he is finally fixing a leaky kitchen faucet, or that he is taking a long needed nap just at the moment the caller needs him. I will be the first to agree with you that constant telephone calls are often a source of irritation, but at all times they must be handled with tact and patience. (This is especially hard to remember when one is trying to bathe a small child or wax a floor.)

Friends and families often inquire about a friend's state of health, and we should tactfully refer them to the physician. An easy way for me to do this is to say, "No, Doctor never discusses his patients with me. Perhaps you could call the office and ask for a statement." Treatment and diagnosis should be left to the discretion of the physician, and should never be indulged in by a member of his family. People always seem to expect the doctor's wife to have a certain understanding of medicine, and also expect her to express an opinion regarding their symptoms. In such situations I have found this statement invaluable over the years—"Well, that *does* sound reasonable to me."

Good taste and moderation, both at home and in public, should be observed by the physician's family. For instance, some clothes just wouldn't be appropriate for me to wear in *our* small town. Notice, I call it *our* small town—for we love it. My husband is in general practice in a town of—you'll never believe this—450 people, and that's after the population explosion! We know everyone, and everyone knows us. They also know that we never leave a phone unanswered and in over 17 years we never have been unreachable unless we were gone for a whole week. Even then we have left someone in charge of answering our calls. We haven't taken a long vacation in seven years, for we find we prefer taking two or three days rather often. Then the patients do not worry about not having a doctor available.

Some of you are probably wondering why we stay in Minden, or why we selected it in the first place. At the top of the list, we felt Iowa had as much to offer us, personally or professionally, as any other state, and with travel as it is today we can reach any large metropolitan area within a few hours by plane. Serving in a small town gives the physician's whole family a satisfaction in knowing that the doctor is trusted all by himself to do his best to care for the people, and that they know he will refer them to a specialist of the proper sort when referral is necessary. We are 22 minutes from two hospitals, with only two stop signs on the way, and near a nucleus of specialists comparable to some of the top ones in our country. We do not have to worry about "keeping up with the Joneses," and our children have the advantage of good schools, with instructors who do not have too heavy a student load to forget about individual problems. Some of the students here might be interested in learning the number of patients to be found in a rural area with a small town at its center. Our office has 15,000 to 18,000 active cards on file at all times. (Anyone who has received no care for two years is placed in the inactive file.)

Now, back to doctors' wives and their special life, I am going to use a poem to bring out what I want to say to you. It was written by a doctor's wife several years ago, and I think it will interest you to know that she is now one of our National Auxiliary committee chairmen.

"IF" for a Doctor's Wife
(with apologies Rudyard Kipling)

by Helen Ulrich

If you can keep your head when patients all about you
Are losing theirs, insisting that the doctor call;
If you can trust your husband with women all about him
And never feel a jealous twinge at all;
If you can learn that people are demanding,
And care nothing for a doctor's private life,
Yet, under tension, still be understanding
And try to be a model, patient wife;

If you can hear a group discuss a diagnosis
About which you know facts on which they err,
And never breathe a word, nor mention a prognosis,
Although to do so would cause quite a stir;
If you can plan a dinner party
And find you're left alone to entertain,
And never show your inner thoughts or disappointment
And not be tempted to complain;

If you can play the role of dad as well as mother,
Explaining to the youngsters why this has to be;
And also doctor Dad, yourself and all the children
(For doctors' families hate to bother an M.D.);
If you can cook a meal at noon or midnight
And serve it fast, and with a pleasant smile,
And, as you eat, hear many cures and symptoms
With the telephone ringing madly all the while;

If you can dress in style and not be ostentatious,
Remembering that the public watches every move you make;

And, when you're tempted to be rude, be gracious,
And often laugh, although your heart would break;

If you can feel *you* chose this man to marry,
And be a loving, cheerful, understanding wife—
You'll find your burdens pleasant ones to carry,
And, what is more, you'll lead a full and happy life!

In closing, I should like to say that we—both the doctors and their wives—have an obligation to the sick, to the pioneers of medicine, to the teachers who have collected the knowledge of the ages and delivered it ready-made to our husbands, and to the thousands of other physicians throughout the world who are trying to bring honor to the name "Doctor." From this it does not follow that we are a privileged class. On the contrary, the community can expect *more* of us because we *are* members of doctors' families.

A Rose Named "The Doctor's Wife"

As a means of raising funds to help equip the playground at the Black Hawk County Development Center, a facility for retarded children, the Woman's Auxiliary to the Black Hawk County Medical Society, is selling rosebushes—very special rosebushes.

"The Doctor's Wife" is a rose hybridized by Gordon Von Abrams, one of only five hybridizers in the United States. It was developed by horticulturist Fred Edmunds, in Wilsonville, Oregon. The rose began as an unnamed hybrid tea rose, a seed parent of "Pink Favorite," probably the most popular pink rose in America today. "The Doctor's Wife" is salmon pink, and it grows on a hardy bush three to four feet in height, with deep green foilage.

The Black Hawk Auxiliary ordered 100 rosebushes from the "City of Roses," Portland, Oregon, and offered them for sale at retail up to May 1. Mrs. Dwight Conklin, president of the organization, Mrs. John Kestel and Mrs. Fred Gerken, all of Waterloo, had charge of the project.

Members of the Black Hawk County Auxiliary also act as nurses and help in staffing the Health Room at the Development Center four days per week. The committee in charge of that project consists of Mrs. Robert Miller, Mrs. T. F. Thornton and Mrs. Carl Hanson.

AMA-ERF Fund Raising Projects

Note Paper
Playing Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036
or
Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

Afternoon of Films to Be New Feature at Annual Meeting at AMA Auxiliary Convention

An afternoon of continuous health education films including films on sex education, drug abuse, physical fitness and nutrition will be a new feature at the 45th annual convention of the Woman's Auxiliary to the American Medical Association.

More than 2,000 physicians' wives are expected to attend the June 16-20 meeting at the St. Francis Hotel in San Francisco. On Sunday, June 16, the Auxiliary will hold a reception for its president, Mrs. Karl F. Ritter, Lima, Ohio, and president-elect, Mrs. C. C. Long, Ozark, Arkansas, from 5 to 7 p.m.

The Monday luncheon will honor the leaders of women's volunteer organizations throughout the United States.

Milford O. Rouse, M.D., the AMA president, will be the guest speaker at the Tuesday luncheon honoring national Auxiliary past-presidents and the AMA officers and trustees and their wives. At that time the Auxiliary will present its annual contribution to the American Medical Association Education and Research Foundation. Last year's gift totaled $384,649.48.

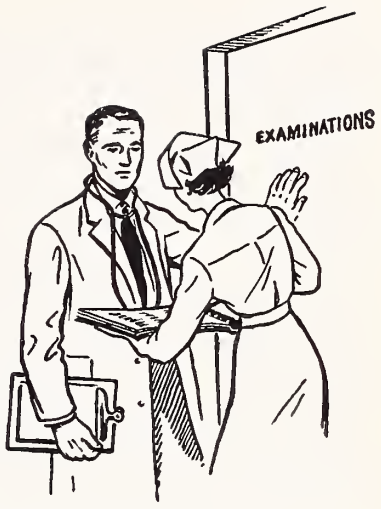
Following that luncheon, films will be shown for the remainder of the afternoon. This new feature will provide Auxiliary members with a catalog of available health education materials to be used in conjunction with existing Auxiliary programs.

The Auxiliary will also sponsor a program of daily activities for the pre-teens and teenagers of Auxiliary members. Local arrangements for the convention are under the direction of Mrs. Lloyd Gillin and Mrs. Don C. Musser, both of San Francisco.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803
President-Elect—Mrs. D. W. Coughlan, 5410 Grand Avenue, Des Moines 50312
Recording Secretary—Mrs. E. D. Wiley, 30 West Kings Highway, Sioux City 51104
Treasurer—Mrs. J. F. Veverka, Box 324, Prairie City 50228
Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316
Assistant Editor—Mrs. B. T. Woodburn, 2809 Sherry Lane, Des Moines 50322

THE DOCTOR'S BUSINESS



Too Much About Public Relations?

LARRY E. LEAVERTON
Des Moines

Public relations can be called the art or technique of promoting good will—the actions an individual takes in promoting good will between himself and his employees, his community, etc.

Good public relations are very important in your professional contacts with your patients, your employees and your colleagues. Physicians frequently are criticized by newspapers, magazines, public officials and ordinary citizens. The complaints generally fall into one of these categories:

(1) Poor business practices
(2) Difficulties experienced in getting appointments
(3) Cost of medical care
(4) Misunderstandings regarding fees
(5) Waste of the patient's time
(6) Impersonal attitudes of some physicians.

We can cite specific examples of poor public relations that we have seen or heard in physicians' offices. There is the receptionist who appears to boast about the fact that her doctor is "booked solid" for the next eight months and seems to expect the patient to count himself fortunate to get to see him even then. There is the elderly and confused patient to whom the receptionist won't bother to explain the workings of Medicare, and who is told, instead: "We didn't write the law." There is the brusque voice on the far end of the telephone line. There is the patient who secured a definite appointment who, when finally admitted to the physician's examining or consulting room, finds that there are constant interruptions and he can't get the doctor's undivided attention.

There are five questions that each patient wants answered, but in some offices the doctor and/or his assistants fail to do the necessary explaining. The patient wants to learn:

(1) What is wrong?
(2) What caused it?
(3) What can be done to correct the condition?
(4) How long will the treatment take?
(5) How much will it cost?

Unless these questions are answered in understandable terms, the patient will go away dissatisfied, and almost certainly will share his dissatisfaction with his relatives and friends.

The problems posed by crowded appointment books, a multitude of complex forms and other paperwork are ones that must be faced. All the indications foreshadow their getting even worse. The routines in physicians' offices will have to be made more efficient if the increasing patient and paperwork loads are to be handled.

To improve your public relations, you can:

(1) Instruct your staff to be alert to any complaints about charges or about allegedly inadequate or improper care.

(2) Have an efficient office—well staffed.

(3) Adopt a reasonable and equitable fee schedule.

(4) Offer courteous, sympathetic understanding to the patient.

(5) Try an unsolicited phone-call follow-up as a means of demonstrating a sincere interest in the patient.

(6) Provide educational material to the patient. The AMA's health-education materials are excellent. Make available pamphlets or brochures containing explanations of your specialty, information about office hours, appointments and the handling of insurance claims and requests for credit, and offering suggestions about what to do in emergencies, etc.

(7) See that your medical assistants are properly trained and instructed in the prompt and courteous handling of patients.

(8) Accept Medicare, Medicaid, insurance forms and other types of red tape with grace rather than with ill temper. Your collections would be poor without them.

(9) Let the patient know not only that he is welcome but that you are anxious to serve him.

(10) See that your office is large enough for comfort and efficiency, clean and fresh looking, and decorated in good taste.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

(11) Be certain that your business office offers privacy for telephone conversations, discussions of fees and financial arrangements.

(12) Have a realistic, workable appointment system that allows adequate time for emergencies.

(13) Be available in emergencies, or provide good coverage for your patients when you are to be away.

(14) Be an active participant in civic affairs as a means of showing your sincere interest in your community.

(15) Finally, provide the best possible medical service to all!

Are public relations important? Yes, very difinitely! Take a critical look at the public relations in your office, and look for areas where they can be improved.

Denver Developmental Screening Test

A graphic new test has been devised to detect abnormal development in infants and small children, the U. S. Public Health Service announced on April 17. The new test, called the Denver Developmental Screening Test, is simple to administer, easy to score, and can be used for repeated evaluations of the same child. Developed under a National Institutes of Health General Research Support Grant, the new screening tool has been recommended to the nation's pediatricians by the American Academy of Pediatrics and is now being used in Project Head Start.

Under the test format, an individual child's performances can be compared quickly with those of other children on a standardized scale for four major functional areas: gross motor, fine motor-adaptive, language, and personal-social.

The new test is not an intelligence test, according to developers Dr. William K. Frankenburg and Dr. Josiah B. Dodds, of the University of Colorado School of Medicine. It is intended mainly as a screening device to detect children with developmental delays.

"It enables the examiner to note whether the development of a particular child is within normal range," said Dr. Frankenburg. "The test does not enable one to make a diagnosis; it is intended only to alert the examiner to the presence of a developmental problem which needs further investigation. Of course, when developmental delays are detected during infancy and the preschool years, it significantly increases the opportunities for effective therapy."

The new test is made up of 105 test items selected from a number of developmental and preschool intelligence tests. These items were administered to 1,036 healthy Denver, Colorado, children between the ages of two weeks and six years. The ages at which 25, 50, 75, and 90 per cent of the children passed each item were calculated for 25 different age categories. In the final screening test, which resulted from the normative data gathered by the investigators, each item is represented by a horizontal bar placed along the age continuum. Various points on the bar illustrate the specific ages at which a percentage of the children passed an item. For example, for the test item, "Walks Well," the left-hand end of the bar designates the age (11.2 months) at which 25 per cent of the children could walk well, and the right-hand end of the bar the age (14.3 months) at which 90 per cent of the children could walk well.

As the developmental screening test was being standardized, the investigators also calculated norms for boys, girls, children whose fathers were "blue collar" employees, and children whose fathers were "white collar" employees. According to Dr. Frankenburg there were few marked differences between the ages at which boys and girls performed individual test items satisfactorily.

"During the first two years of life there were also no marked differences in the ages at which children of parents from differing occupational groups could perform the test items," said Dr. Frankenburg. "After two years of age, the children of white-collar workers performed a number of language items at an earlier age than children of blue-collar workers."

Using General Research Support funds, Drs. Frankenburg and Dodds are currently investigating the development of 1,000 Denver children whose fathers are in unskilled occupations, with the idea of possibly creating a separate test for use in examining those children. Neurologic and developmental problems are more likely in children from that group, according to Dr. Frankenburg.

The Division of Research Facilities and Resources, National Institutes of Health, administers the General Research Support grants under which the Denver Developmental Screening Test was devised.

Iowa Thoracic Society

Ian Maclean Smith, M.D., Iowa City, president of the Iowa Thoracic Society, invites all Iowa physicians to attend the hospitality hour, dinner and medical program of the organization's nineteenth annual meeting to be held at Hotel Savery, Des Moines, Wednesday evening, May 8, 1968 beginning at 5:30 p.m. Spouses are invited.

The annual business meeting and election of officers and executive committee will be held from 4:00 to 5:30 p.m.

The medical program scheduled from 7:30 to 9:00 p.m. will have as the principal speaker Dr. Boyd Bigelow, of the University of Colorado Medical Center, Denver, who will discuss the new Intensive Respiratory Care Unit at his institution and the management of patients in respiratory failure.

ACP Course at Iowa City During June

The American College of Physicians will conduct a course entitled "Basic Principles in Internal Medicine" in the auditorium of the U. of I.

College of Pharmacy June 10-14. The fees are $60 for members and $100 for nonmembers. The maximal registration is 150, and advance registrations should be made with Edward C. Rosenow, Jr., M.D., 4200 Pine Street, Philadelphia 19104.

Monday, June 10

9:15 a.m. "Advances in Diagnosis and Treatment of Syphilis"—C. E. Radcliffe, M.D.
9:35 a.m. "Infectious Mononucleosis"—Sergio Rabinovich, M.D.
9:55 a.m. "Infectious Problems in Servicemen Returning From Vietnam"—Jay P. Sanford, M.D., Dallas
10:50 a.m. "Antibiotics and Problem Situations"—George W. Lewis, M.D.
11:10 a.m. "Pseudomonas Infections"—Ian M. Smith, M.D.
1:30 p.m. "Treatment of Diabetic Acidosis"—Joseph D. Brown, M.D.
2:10 p.m. "Differential Diagnosis of Hypoglycemia"—Daniel B. Stone, M.D.
2:45 p.m. "Diagnosis and Treatment of Klinefelter's Syndrome"—Raymond G. Bunge, M.D.
3:30 p.m. "Design and Interpretation of Tests for Diabetes Mellitus"—Kelly M. West, M.D., Oklahoma City

Tuesday, June 11

9:00 a.m. "Maintaining Blood in the Fluid State"—John C. Hoak, M.D.
9:20 a.m. "Pathogenesis of Disseminated Intravascular Clotting"—Donald G. McKay, San Francisco
10:30 a.m. "Mechanisms of Thrombocytopenia"—Henry E. Hamilton, M.D.
10:50 a.m. "Evaluation and Treatment of Intravascular Clotting"—Kenneth L. Walgren, M.D.
1:30 p.m. "Recent Significant Developments in Nephrology and Hypertension"—W. M. Kirkendall, M.D.
1:45 p.m. "Immunopathology of Renal Disease"—C. B. Wilson, M.D.
2:15 p.m. "Adrenocortical Disease and Hypertension"—Dr. Kirkendall
2:35 p.m. "Calcium, Phosphorus and Magnesium Metabolism and Kidney Function"—R. M. Freeman, M.D.
3:05 p.m. "Clinical Significance of Natriuretic Hormone"—Jay H. Stein, M.D., Dallas
3:40 p.m. "Poisons and Their Removal"—George E. Schreiner, M.D., Washington, D. C.
4:20 p.m. PANEL: TREATMENT OF PATIENTS WITH UREMIA —G. B. Theil, M.D., Catherine J. Condon, M.D., R. M. Freeman, M.D., D. A. Culp, M.D., Dr. Schreiner

Wednesday, June 12

9:00 a.m. "Recent Significant Events in Cardiology"—L. E. January, M.D.
9:20 a.m. "Principles of Transport of Electrolytes Across Membranes, With Special Reference to Myocardial Cells"—F. P. J. Diecke, M.D.
10:00 a.m. "Action and Interaction of Antihypertensive Drugs"—J. A. Oates, M.D., Nashville
10:35 a.m. PANEL: CLINICAL IMPLICATIONS OF DERANGEMENTS IN MEMBRANE TRANSPORT—F. W. Kroetz, M.D., E. O. Theilen, M.D., and Drs. Diecke and Oates
11:20 a.m. "Organ Blood Flow in Shock"—J. W. Eckstein, M.D.
11:45 a.m. "Studies of Sympathetic Innervation, With Reference to Orthostatic Hypotension and Raynaud's Phenomenon"—Francois Abboud, M.D.
1:30 p.m. "Newer Concepts of Heart Block"—T. E. Layman, M.D.
1:50 p.m. "Evaluation of Myocardial Function in Patients With Coronary Artery Disease, With Comments on Implantation Results"—R. S. Ross, M.D., Baltimore
2:40 p.m. "Hyperkinetic Circulatory States"—W. R. Wilson, M.D.
3:15 p.m. "Analysis of Plasma Lipoprotein Disorders by Electrophoresis"—M. L. Armstrong, M.D.
3:35 p.m. "Prevention and Intervention in the Natural Course of Coronary Artery Disease, With Comments on Newer Antiatherosclerotic Agents"—W. E. Connor, M.D.
4:00 p.m. MEDICAL-SURGICAL CLINIC: CORRECTABLE CAUSES OF MITRAL INSUFFICIENCY—D. C. Funk, M.D., W. B. Bean, M.D., J. L. Ehrenhaft, M.D., J. M. Kioschos, M.D. and Dr. Ross
7:30 p.m. BANQUET Speaker: Samuel E. Stumpf, president, Cornell College, Mt. Vernon, Iowa —"Morals and Medicine"

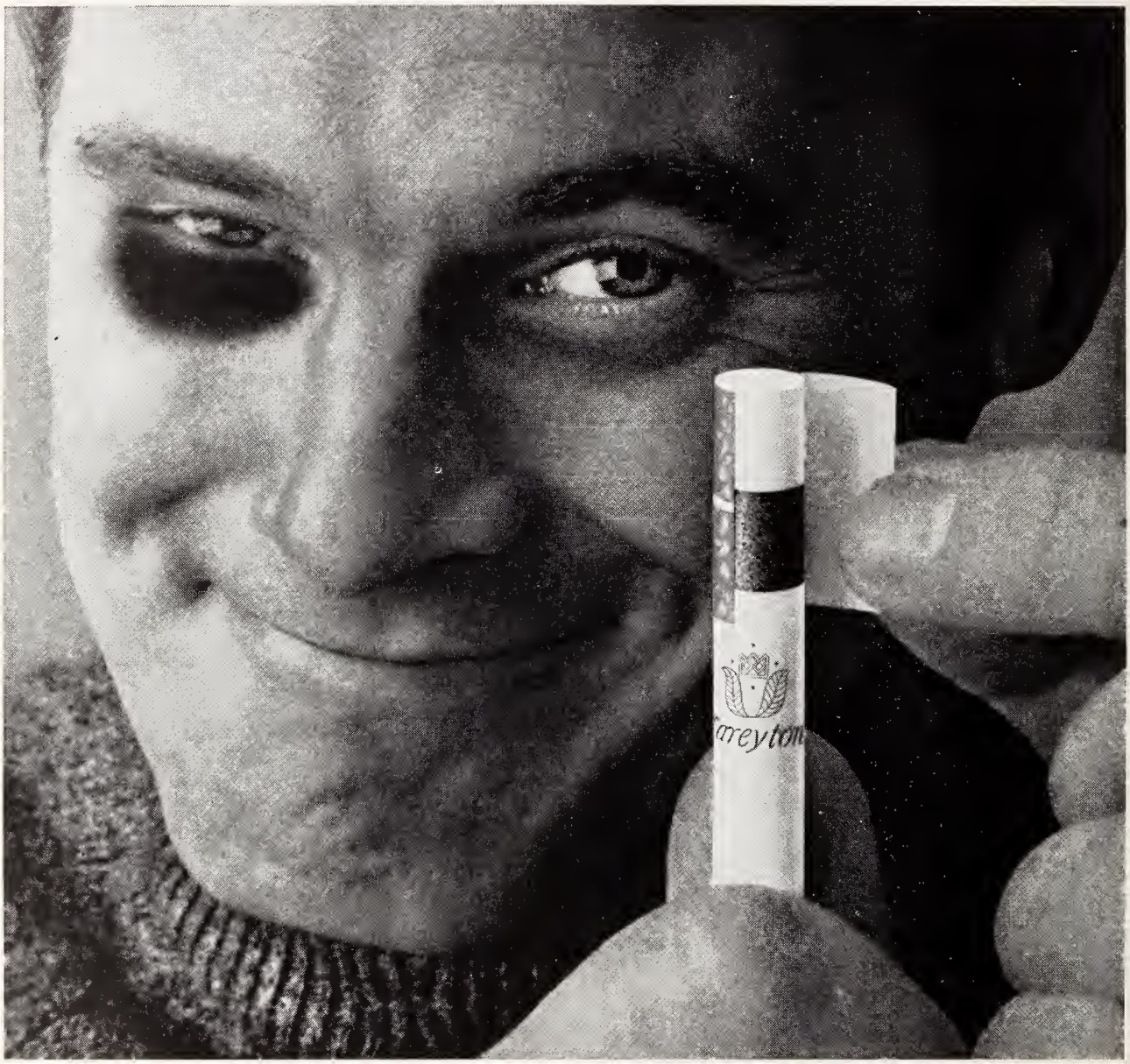
Thursday, June 13

9:00 a.m. "Use of Blood-Gas Measurements in Patients With Lung Disease"—G. N. Bedell, M.D.
9:30 a.m. "Home Care of the Patient With Chronic Obstructive Airways Disease"—R. M. Cherniack, M.D., Winnipeg
10:35 a.m. "Interstitial Allergic Granulomatous Pneumonitis"—C. E. Reed, M.D., Madison
11:05 a.m. CLINIC: USE OF RESPIRATORS—INDICATIONS, COMPLICATIONS AND TECHNICAL ASPECTS—A. R. Boutros, M.D., H. B. Richerson, M.D., P. M. Seebohm, M.D., and Drs. Cherniack and Bedell
1:30 p.m. "Natural History of Respiratory Allergy" —Jeanne Smith, M.D.
2:00 p.m. "Evaluation of Serum Protein Disorders" —Dr. Richerson
2:30 p.m. "Immunosuppressive Agents in the Treatment of Connective-Tissue Disorders"—M. P. Strottmann, M.D.
3:15 p.m. "Organ Transplantation—Present and Future"—S. L. Koutz, M.D., San Francisco
4:05 p.m. "The Scientific Contributions of Walter Reed"—Dr. Bean

Friday, June 14

9:00 a.m. "Neuropharmacology of the Lower Esophageal Sphincter"—James Christensen, M.D.
9:20 a.m. "Introduction: The Problem of Granulomatous Enterocolitis"—J. A. Clifton, M.D.
9:25 a.m. "Clinical Picture of Granulomatous Enterocolitis"—K. A. Hubel, M.D.
9:45 a.m. "Pathological Features of Granulomatous Enterocolitis"—T. H. Kent, M.D.
10:00 a.m. "Treatment of Granulomatous Enterocolitis" —Lawrence DenBesten, M.D.
10:45 a.m. "Calcium Metabolism in Gastrointestinal Disease"— H. P. Schedl, M.D.
11:05 a.m. "Liver Scanning and the Diagnosis of Hepatic Disease"—J. H. Christie, M.D.
11:25 a.m. "How Does the Liver Handle BSP?"—E. Lee Forker, M.D.
11:45 a.m. "Congenital Hyperbilirubinemia"—William Foulk, M.D., Rochester, Minnesota

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Personals



Dr. Paul G. Koellner, of Ames, and **Dr. Alfred Healy,** of Iowa City, both of them pediatricians, are among 525 specialists appointed by the American Academy of Pediatrics to serve as medical consultants to Head Start programs in their respective communities. Their tasks include reviewing the medical aspects of Head Start applications, meeting with planning committees, maintaining contact with the medical directors of the programs and with the Office of Economic Opportunity, and evaluating the work.

Dr. B. E. Peterson, a Keokuk radiologist, spoke to the Kiwanis Club in Washington, Iowa, on March 27, and **Dr. Robert Gillies,** an associate in radiology at University Hospitals, Iowa City, addressed the Rotary Club in the same town on the following day, March 28. Both spoke on cancer to kick off the American Cancer Society's annual April crusade. **Dr. Duane Warden,** a Council Bluffs gynecologist, was chairman of the Iowa Division's fund-raising effort this year.

A feature article in the WATERLOO COURIER for March 24 recounted the ups and downs of Planned Parenthood of Black Hawk County. The organization was first set up on September 26, 1966, but by December of that year it had closed its clinics. **Dr. Maurice Wicklund,** of Waterloo, president of the Black Hawk County Medical Society, was quoted as attributing part of its difficulties to its failure to make formal application for the County Medical Society's support. Also, the Black Hawk Pharmaceutical Society was critical of its mode of operation. But on March 10 of last year the County Medical Society gave its endorsement, and on September 19, 1967, a family-planning clinic for residents of northeast Iowa began weekly sessions at Allen Memorial Hospital, Waterloo. University Hospitals, Iowa City, flies a senior resident in obstetrics and gynecology and several medical-school seniors there for each Wednesday. In addition, physicians are assigned to the project by the Black Hawk County Medical Society on a rotating basis. From 10 a.m. to noon, the emphasis is on prenatal care, and from noon on, the emphasis is on postpartum care and family planning. From September, 1967, to February, 1968, a total of 64 patients were provided family planning service, and 63 were provided prenatal care. The family-planning aspect includes help with infertility problems as well as with birth control. **Dr. Philip R. Hastings** is chairman of the committee of the County Medical Society that advises the organization regarding policy matters. Financing—chiefly for plane service between Iowa City and Waterloo—is provided by the Maternal and Child Health Division of the State Health Department.

Dr. Addison W. Brown, a Des Moines gynecologist, showed the film "A Time for Decision" at the March 19 meeting of the Franklin School Parent-Teacher Association, in Boone. The moving picture is made available by the American Cancer Society, Iowa Division, Inc., of which Dr. Brown is a past-president.

Fred J. Ansfield, M.D., professor of clinical oncology at the University of Wisconsin Medical Center, Madison, presented a program on cancer control for clergymen of 10 south-central Iowa counties at the Methodist Church in Osceola on March 20, and for those of nine southeastern Iowa counties, on March 21, at the Holiday Inn, in Ottumwa. Other participants were **Dr. Paul Ferguson,** of Lake City, chairman of the IMS Committee on Medicine and Religion, and **Rev. Mr. Russell C. Striffler,** clinical chaplain supervisor at Iowa Methodist Hospital, Des Moines.

Dr. Henry Kosieradzki, director of the Marshalltown Mental Health Center, was the guest speaker at an open meeting of the Poweshiek County Mental Health Association, in Grinnell on March 13. His topic was the role of the school in the mental health of children.

At a recent reorganizational meeting of the Palo Alto County Heart Unit, **Dr. Lowell O'Connor,** of Emmetsburg, accepted the presidency of its board of directors.

When he returned to Da Nang, South Vietnam in mid-March, **Dr. Elmer M. Smith**, of Des Moines, found a deadly plague raging. He is there, this time, as a consultant to the U. S. Agency for International Development (AID). He was saddened by the discovery that the medical unit with which he worked last year had been wiped out by enemy action.

Dr. Tom Largen, of Hamburg, has been named temporary medical examiner for Fremont County, following the death of **Dr. Ralph Lovelady**, of Sidney. Dr. Largen, who joined **Dr. F. M. Ashler** only a few months ago, will also attempt to carry on Dr. Lovelady's practice by spending three afternoons each week in Sidney.

Dr. Robert Gauchat, an associate professor of pediatrics at the U. of I. College of Medicine, attended a recent television-utilization clinic sponsored by the Network for Continuing Medical Education and held at the University of Indiana. It emphasized methods by which medical schools might use television more effectively in their teaching programs.

The March 14 issue of the CEDAR RAPIDS GAZETTE contained a "Letter to the Editor" from **Thomas W. Murphy, M.D.**, medical director of the Linn County Mental Health Center, congratulating the newspaper for an account of an automobile accident in which seat belts were credited with saving the lives of two women. "There are many personal and possibly legal implications in reporting that someone who had been killed might have been saved had he been wearing a seat belt," Dr. Murphy went on to say. "However, that same person might not be dead if he had been more aware of the fact that seat belts can save lives. I encourage you to keep on reporting this kind of information whenever it is available."

In connection with a Des Moines mayor's proclamation designating March 17-23 as Poison Prevention Week, **Dr. Julius S. Conner,** director of the Des Moines-Polk County Health Department, said that one Des Moines hospital had reported 19 cases of poisoning during the current year. He also mentioned the recent death of a Des Moines three-year-old who had eaten rat poison.

Some 545 people registered at the March 3 open house of the Melcher-Dallas Medical Center, a two-doctor office building in Melcher for which the Sears-Roebuck Foundation helped with the planning and fund-raising. The structure now has one occupant, **Dr. George Malouf.**

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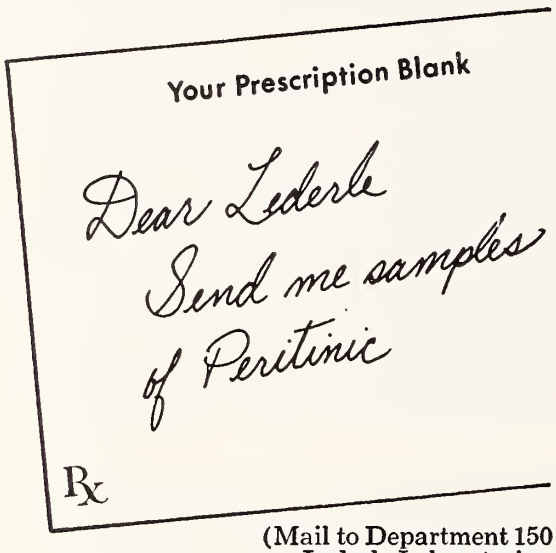
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The offices of 11 doctors in the Medical Arcade Laboratory, 1953 First Avenue Southeast, Cedar Rapids, were burglarized during the night of March 15-16. Sums of money were taken from the office of **Dr. Walter M. Block** and from that of **Drs. Newell G. Ingle** and **Russell W. Conkling.** Other offices that were entered belong to **Drs. Jerald Greenblatt, Sylvan M. Lehr, Carl R. Aschoff, Carlton B. Lake, Francis E. Flannery, Clifford A. Hendricks, Keith W. Woodhouse, Edward F. Kopecky,** and **James J. Redmond.** Nothing was taken at any of those latter places.

The Jefferson County Medical Society has given $247.26 to the building fund of the hospital at Fairfield. The sum constituted the surplus of 50¢ donations collected during the Society's February measles clinic, after the vaccine and other supplies had been paid for.

Dr. R. E. Weland, a Cedar Rapids pathologist, addressed a Cancer Society Crusade kick-off meeting on March 18 at the Methodist Church in Traer.

On March 20 **Governor Harold E. Hughes** announced the resignation of **Dr. Arthur P. Long** as state health commissioner, effective June 30. He said that Dr. Long, 59, was resigning for "purely personal considerations"—that Dr. and Mrs. Long want to do some traveling that they have been planning for several years. Dr. Long undertook his present duties in 1964.

Dr. Gene Kuehn, a Mason City gynecologist, was the featured speaker at a public meeting on sex education held in the junior high school auditorium in Spencer on March 20. His talk, "Too Little and Too Late" was sponsored by the Spencer PTA.

Drs. Robert Bremner and **Dr. John Napier,** of Cedar Falls, answered the questions of sixth, seventh and eighth grade girls and their mothers following the March 20 and 21 showings of a film entitled "Girl to Woman," under the auspices of the nurses of the Cedar Falls Community Schools.

An office building is being built at Central Avenue and Seventeenth Street, Fort Dodge, by Professional Office Builders, of Madison, Wisconsin, for **Dr. Richard Tripp** and **Dr. James E. Reed.** Dr. Reed is presently associated with **Dr. Eric Swanson.** It is expected that the structure will be ready for occupancy by late this coming summer.

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On April 9, **Dr. Leroy K. Berryhill,** a Newton psychiatrist, addressed the Rotary Club there on sex education in the public schools. He urged incorporating material on family living (which would include sex education) into regular school courses from kindergarten through senior high school. It could be worked into reading, science and social science classwork, he said.

The Black Hawk County Mental Health Center, in Waterloo, will have a new medical director on May 1. He is **Dr. William Gene Stone**, who has been a staff psychiatrist at the Independence Mental Health Institute. He took his M.D. at Iowa City in 1962, and completed his psychiatric residency at the Independence hospital. The Waterloo Center has been without a full-time medical director since the resignation of **Dr. Harold Korner,** in August, 1967. During the interim, **Dr. Paul Warner,** of Cedar Falls, has held the post on a part-time basis.

Dr. S. M. Haugland announced recently that **Dr. R. E. Carter, Jr.,** who had been doing general practice in St. Paul, was to join him shortly in Lake Mills. When this appears in print, he doubtless will have arrived. Dr. Carter is a graduate of the University of Indiana Medical School.

Dr. M. T. Bates, of Des Moines, was the guest speaker at the March 28 meeting of the Dallas-Guthrie Medical Society, in Guthrie Center.

Dr. George A. Jardine, of New Virginia, who had been a patient at the Clarke County Hospital, in Osceola, for some time, was taken to a rest home in Creston on March 25. Dr. Jardine is an associate member of the IMS.

Dr. Sidney Kripke, assistant director of the State Services for Crippled Children, at the U. of I. College of Medicine, addressed a group of public health nurses in Cedar Rapids, on April 3, on "Criteria for Early Identification of Emotional and Developmental Problems."

The Chariton community is to hold a testimonial dinner at the National Guard Armory, there, on May 4, honoring **Dr. Albert L. Yocum** for his 59 years of service.

Dr. Lewis E. January, a professor of medicine and the director of clinical cardiology at the U. of Iowa College of Medicine, headed the medical delegation from the United States at the Eighth Inter-American Congress of Cardiology, in Lima, Peru, April 21-27. Dr. January is the immediate past-president of the American Heart Association. The InterAmerican Society meets once every four years.

For the benefit, doubtless, of those of us who suppose that the vast majority of physicians head either for Florida or Southwestern United States when they quit practice, **Mr. Gordon Gammack** reported in a recent issue of the DES MOINES TRIBUNE that all but seven of the 33 "retired" Polk and Warren County physicians continue to live in Iowa.

Obesity was the subject of the Medical Forum of the Air broadcast over the Des Moines Public Schools station KDPS-TV on Thursday, April 18. The participants included **Dr. Daniel Glomset,** an internist; **Dr. Daniel F. Crowley,** a surgeon; and **Dr. Robert J. Foley,** a general practitioner.

On Tuesday, May 7, at 1:15 p.m., **Dr. Lloyd M. Nyhus,** chairman of the Department of Surgery at the U. of California School of Medicine, San Francisco, will lecture on the topic "Reflections Upon the Lower Esophagus" in Room 423 of the Main Building at the Des Moines VA Hospital. The series of lectures is being sponsored by Merck, Sharp & Dohme.

Dr. Tom D. Throckmorton, a Des Moines general surgeon, talked on "The Breast" at the April 17 meeting of the Des Moines Chapter of Medical Assistants, following dinner at Noah's Ark.

Dr. Saifuddin S. Rasiwala, who practices at Lutheran Hospital, Des Moines, has become a fellow of the American College of Anesthesiologists.

Dr. John E. Gustafson, a Des Moines pediatrician, participated in a panel discussion of the topic "Broader Aspects of the Group Concept" at the AMA Conference on the Socioeconomics of Health Care in Chicago during mid-March.

Drs. Donald C. Green and **Harold Eklund,** general practitioners in Urbandale, a Des Moines suburb, were put in charge of the Drake University Health Service on March 20. Dr. Green is also in charge of the school-health program of the Des Moines Independent Community School District.

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The director of the newly established State Department of Social Services, **Mr. Maurice A. Harmon,** announced on April 5 that **Dr. Otto N. Glesne,** of Fort Dodge, is to replace **Dr. Elmer M. Smith** as director of medical services for his organization. Dr. Glesne practiced in Fort Dodge from 1926 until early in the 1960's. Then he served for a brief period as head of the health service at St. Olaf College, in Northfield, Minnesota. He served as the president of the IMS in 1961-1962.

The doctors of medicine who spoke at the kickoff luncheon for the Cancer Crusade in Des Moines on March 29 were **Dr. Duane Warden,** of Council Bluffs, **Professor Titus C. Evans,** head of the radiation research laboratory at the U. of I. College of Medicine, and **Dr. Howard B. Latourette,** head of radiology at the U. of I. College of Medicine. The meeting took place at the Savery Hotel.

At the Cancer Crusade kickoff meeting in Cedar Rapids on April 4, the speakers included Dr. Latourette and **Dr. Gilbert J. Roller,** of Cedar Rapids.

The March 27 issue of the MARSHALLTOWN TIMES-REPUBLICAN contained an account of an interview with **Dr. Edward L. Jacobs,** a general practitioner there, regarding the hazards of cigarette smoking. Dr. Jacobs was said to have told the reporter, "Early warnings of harmful effects are so subtle as to be entirely overlooked or ignored by the person involved. Smokers put up with runny noses, throat irritations, postnasal drips, deep gravelly voices and a mouth that frequently feels like the inside of the legendary motorman's glove, and many are quite used to a chronic cough."

He quoted the following American Cancer Society statistics: Lung cancer was responsible for 52,000 deaths in the U. S. last year, 8,000 of which occurred to women. Lung cancer now is killing more men each year than any other form of cancer—15 times as many as it was killing each year 35 years ago.

Dr. R. W. Boulden, of Lenox, a member of the IMS Rural Health Committee, attended the annual AMA Rural Health Conference on March 29, 30 and 31. This year it was held in Seattle.

Dr. Leo Sedlacek, a Cedar Rapids psychiatrist, announced on March 27 that incorporation papers had been filed with the Iowa Secretary of State for an Iowa Alcoholism Foundation. The incorporators, in addition to Dr. Sedlacek, are **Mrs. Edwin Butler** and **Mrs. E. T. Meredith,** of Des Moines, and **Mr. Sutherland Cook,** of Cedar Rapids. **Mr. George R. Ludwig,** of Des Moines, will be its recording secretary. The purpose of the nonprofit corporation is to combat alcoholism through every conceivable avenue. Immediate activity will center on public-information programs. Mr. Ludwig explained that the Foundation does not plan to advocate abstinence or to promote the use of alcoholic beverages. Its sole purpose is the alleviation of problem drinking and addictive alcoholism. It hopes to demonstrate that alcoholism, like diabetes, can be stopped but not cured. It will cooperate with local agencies.

Dr. Samuel J. Fomon, a professor of pediatrics at the U. of I. College of Medicine, presented material to and participated in discussions by a committee on psychological-social deprivation, at the National Institute of Child Health and Development, in Washington, D. C., during March.

Dr. Patrick Campbell, an assistant professor of psychiatry at the U. of I. College of Medicine, showed a film and led a discussion at a two-day workshop on psychiatric nursing at Mercy Hospital, Council Bluffs, late in March. Registration for the sessions totaled 62.

On Monday, March 18, **Drs. Oscar Alden, H. C. Bastron** and **John H. Odell** moved into their new office building in Red Oak.

The "Recognition Night" for **Dr. Eugene C. Wagner,** of Plainfield, originally scheduled for April 5, had to be postponed indefinitely when he required hospitalization. Dr. Wagner was about to retire because of ill health.

Dr. R. H. Flocks, head of urology at the U. of I. College of Medicine, is one of five physicians whose comments on hormonal treatment of prostatic cancer were included in the March 25 issue of MODERN MEDICINE.

Dr. George L. Baker, an assistant professor of pediatrics at the U. of I. College of Medicine, was named on April 3 an "outstanding young religious leader" at a Mayors' Prayer Breakfast held in the Memorial Union in Iowa City. The event was arranged by the Jaycees, and the mayors of Iowa City and Coralville were the guests of honor. Dr. Baker is a member of the board of the First Baptist Church of Iowa City, a member of the advisory council of the United Campus Christian Ministry Day-Care Center, a lecturer for the graduate colloquium of the School of Religion, and a resource leader for the U. of I. Baptist Student Center.

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Contraindications: Sensitivity to any component, porphyria, peptic ulcer, ulcerative colitis, mental depression, renal impairment or shutdown. **Warnings:** Consider the possibility of sensitivity reactions in patients with history of allergy or bronchial asthma. Coated potassium tablets, sometimes administered in conjunction with antihypertensive therapy, may be associated with small bowel lesions, which have led to obstruction, hemorrhage and perforation. Surgery has frequently been required and deaths have occurred. Such tablets should be used only when indicated and when adequate dietary supplementation is not practical. They should be discontinued immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occur. *Use in Pregnancy:* Exercise caution, since thiazides cross the placental barrier and may cause fetal or neonatal hyperbilirubinemia, thrombocytopenia or altered carbohydrate metabolism; adverse reactions seen in the adult may occur in the newborn. **Precautions:** *Butisol* (butabarbital)—Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression. *Hydrochlorothiazide*—May induce electrolyte imbalance; when used with digitalis or one of its glycosides and in patients with severe hepatic insufficiency, cardiac arrhythmias or symptoms of impending hepatic coma may occur. Discontinue and institute appropriate countermeasures if prolonged use produces hypokalemia or (likely only with sodium restriction) hyponatremia and hypochloremic alkalosis. (Ammonium chloride, used to reverse hypochloremic alkalosis, is contraindicated in hepatic disease.) May produce elevated serum uric acid levels (and, infrequently, gout) or reduce glucose tolerance, altering insulin requirements in diabetics. *Reserpine*—Observe for signs or symptoms of peptic ulcer or ulcerative colitis. Discontinue at first sign of mental depression; keep in mind possibility of suicide. Exercise extreme caution in history of mental depression. May produce cardiac arrhythmias when used with digitalis and quinidine, or may precipitate biliary colic in patients with gallstones. Discontinue 1 to 2 weeks before surgery; inform the anesthetist in event of emergency surgery. Exercise caution in history of epilepsy. Discontinue 1 to 2 weeks before ECT. *General*—Reduce concomitant antihypertensives by at least 50%, and exercise caution in coronary artery disease. **Adverse Reactions:** Dizziness, drowsiness, weakness, nasal congestion, leg cramps, nausea, palpitation, superficial skin bruises, headache, dehydration, skin rash, "hangover," systemic disturbances, diarrhea, itching, vomiting, paresthesia, photosensitivity, pancreatitis, jaundice, xanthopsia, purpura, thrombocytopenia, leukopenia, agranulocytosis, aplastic anemia, anorexia, gastric irritation, abdominal cramping, constipation, glycosuria, vertigo, cutaneous vasculitis, orthostatic hypotension (potentiated by alcohol, barbiturates, or narcotics), increased salivation and gastric secretion, increased intestinal motility, loose stools, angina-like syndrome, arrhythmias, bradycardia, flushing, hypotension, nervousness, paradoxical anxiety, rarely atypical Parkinsonian syndrome, central nervous system sensitization (manifested by dull sensorium, deafness, glaucoma, uveitis, optic atrophy), dryness of mouth, syncope, epistaxis, weight gain, and impotence or decreased libido. **Usual Adult Dosage:** BUTISERPAZIDE®-25 or BUTISERPAZIDE®-50: 1 tablet daily or b.i.d. *Before prescribing or administering, see package insert.*

References: 1. Johnson, H. J., Jr.: Penna. M. J. **67**:35, 1964. 2. Coodley, E. L.: Curr. Ther. Res. 4:460, 1962.

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Two Des Moines internists, **Drs. James Kelsey** and **Edward Hertko,** were the delegates of the Iowa Society of Internal Medicine at the annual meeting of the American Society of Internal Medicine, in Boston on March 29-31.

Dr. Don O. Newland, a Des Moines obstetrician and gynecologist, was one of four panelists who discussed the Colorado abortion law at the West Side Branch Library, there, on March 21. He was quoted as saying that the right conditions consist of the performance of the abortion in a hospital before the thirteenth week of pregnancy, and that the operation "is probably safer than having your tonsils out."

Dr. William B. Bean, head of internal medicine at the U. of I. College of Medicine, presented the annual Stockton Kimball Memorial Lecture on April 6 at the School of Medicine of the State University of New York in Buffalo. His topic was "Walter Reed: His Contributions to the Control of Typhoid and Yellow Fever." His audience consisted, in major part, of alumni of the Buffalo school. Dr. Bean is currently on leave from the U. of I. and is serving as a visiting professor of medicine and of history at the University of Virginia Medical School, in Charlottesville.

On April 2, **Dr. Malcolm Peterson,** an assistant professor of medicine and director of the Division of Gastroenterology at the University of Washington School of Medicine, lectured on "The Environmental Crisis" at Coe College, in Cedar Rapids, under the sponsorship of the Cedar Rapids Garden Club. The hazards of which he spoke are soil, air and water pollutants.

Dr. Clifford Rask, of Maquoketa, served as chairman of the Cancer Society's fund-raising campaign in Jackson County last month. **Dr. J. A. Rapagnani,** of Keokuk, served as chairman in Lee County.

William J. Hausler, Ph.D., head of the State Hygienic Laboratory described the work of his organization and shared some of his problems at a meeting of the Des Moines County Tuberculosis and Health Association held in the Grace Methodist Church, Burlington, on March 28, and at the spring meeting of the Wright County Tuberculosis and Health Association, at the Congregational Church in Rowan, on April 2. The Laboratory employs 73 people and needs more, he reported, and the volume of its mail-order work is indicated by the size of its postage bill—$2,000 per month. The Iowa City facility (there also is a branch laboratory in Des Moines) receives an average of 1,500 specimens of various sorts daily, of which 1,000 are blood samples for routine analysis. It

appraises private and semi-private laboratories, and recommends or refuses to recommend their licensure by the State Department of Health. Seventy-one of them have been approved for blood-testing, but he warned that many others do "shockingly poor work."

The State Hygienic Laboratory is housed in a number of buildings on the U. of I. campus, including three frame houses. Dr. Hausler said that the Legislature ordinarily is generous in providing equipment, but at its most recent session it ordered him and his staff to investigate air- and water-pollution without providing any funds for that purpose, and thus far it has failed to provide adequate "bricks and mortar" for the Laboratory.

Dr. R. S. Jaggard, of Oelwein, was one of the speakers at the Seventeenth National Convention of the Congress of Freedom, Inc., a four-day affair held in the Hotel Blackhawk, Davenport, at the start of April. One of the other speakers was former **Major General Edwin A. Walker,** of Dallas.

Dr. Scott Linge, of Fayette, spent the first three weeks of April on St. Lucia, an island in the British West Indies, under the auspices of the AMDOC program. His son, **Scott Jr.,** a sophomore at the Fayette Community School, accompanied him. Vieu Fort, St. Lucia, has a disused 200-bed hospital that was a part of lend-lease during World War II. Part of it was reopened two years ago by the Sisters of the Sorrowful Mother. There is just one doctor of medicine permanently located there to serve a populace of about 30,000. Dr. Linge expected to spend most of his time organizing an anesthesia department and training local people to operate it.

Dr. J. R. Gambill, medical director of the Mental Health Institute at Clarinda, announced on April 4 that **Dr. Huberta V. Rice,** who has been in private medical practice in Brookfield, Missouri, would join his staff later that week. Dr. Rice and her husband have two children, 12 and 15 years of age.

Dr. Thomas J. Egan, of Bancroft, recently was unanimously selected by the members of the executive council of the Creighton University Alumni Association to receive its Alumni Achievement Citation. It is given at graduation time each year to a former graduate who has brought distinction to his *alma mater.* **Richard Egan,** the fourth son of Dr. and Mrs. Egan to graduate from the Creighton Medical School, will receive his M.D. degree there at the same time. The three older sons and their families plan to be present at the ceremony, and to help celebrate Dr. Egan's sixty-fourth birthday. He has served Bancroft

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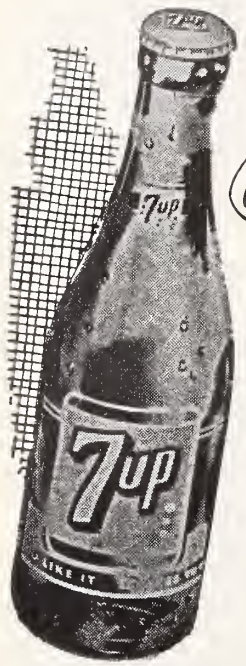
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MUDRANE GG ELIXIR—Four 5 cc teaspoonfuls is equivalent to one Mudrane GG tablet. Dosage adjusted to age and weight of child. Mudrane GG Elixir is for pediatric patients and those who think they cannot swallow tablets. Dispensed in pint and half gallon bottles.

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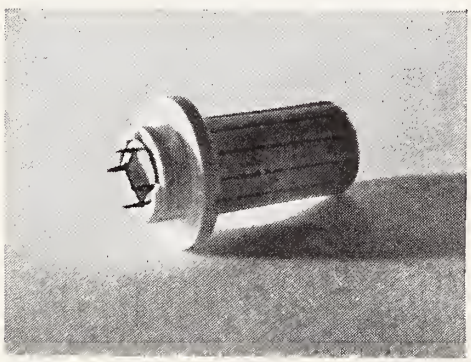
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Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

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since 1936, but prior to that time he had practiced elsewhere in Iowa for about five years.

The Black Hawk County Multiple Sclerosis Society has chosen **Dr. Andrew C. Smith**, of Waterloo, to head its 1968 "Hope Chest Drive." He has been a board member for the past four years.

In answer to the question "What are the main health problems that you see in Davenport and Scott County?" asked there by a reporter from the DES MOINES REGISTER, **Dr. P. J. Crowley** was quoted in the April 3 edition of that newspaper as answering: "Lack of physicians—the same problem as anyplace else in the country. The main reason is that people are bringing to the doctors things that they used to give us a good whack on the bottom for. Now people run to the doctor with skinned knees and bloody noses. The ratio of doctors to persons in Davenport is about one to each 1,100 persons, but if you take out the specialists and those doctors who don't treat sick people, the ratio is about one doctor to each 4,000 people."

In reply to the same question, **Dr. Paul H. Beckman**, a surgeon, is said to have replied: "I'm very impressed with the high medical and surgical standards in this area. What I see in the hospitals, in the practice of surgery is good. I've been in Davenport only 2½ months. . . . The coverage on emergency service is excellent, from the doctors' and hospitals' standpoint."

Dr. John L. Powers, Dr. Donald E. Wolters, Dr. A. E. Montgomery and a surgeon who they expect will join them on July 1, have a new clinic building in which to practice, at Estherville. The structure, on First Avenue North, east of St. Patrick's Catholic Church, was ready for occupancy a few weeks ago.

Dr. Earl J. McKeever, of Knoxville, has been appointed city health officer, succeeding the late **Dr. F. P. Ralston.** The appointment was made on the recommendation of the Marion County Medical Society.

After **Dr. Evan Peterson** submitted his resignation, but agreed to continue temporarily in the post of medical examiner of Des Moines County, the April 2 issue of the BURLINGTON HAWKEYE reported that virtually all other members of the County Medical Society had told their president, **Dr. H. N. McMurray** that they were too busy to accept even a tentative appointment as Dr. Peterson's successor. Thirteen doctors were said to have suggested that they be appointed to serve for 30 days each, on a rotating basis. One of the basic objections that they raised had to do with the

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Contraindications: Comatose states or the presence of large amounts of C.N.S. depressants.

Precautions: Potentiation of C.N.S. depressants may occur (reduce dosage of such agents when used concomitantly). Use with caution in patients with chronic respiratory disorders. Antiemetic effect may mask overdosage of toxic drugs or obscure other conditions. Administer in pregnancy only when necessary. Because of possible drowsiness use cautiously and warn patients who operate vehicles or machinery.

Adverse Reactions: Drowsiness; dry mouth; nasal congestion; constipation; amenorrhea; miosis; mild fever; weight gain; hypotensive effects, sometimes severe with I.M. administration; epinephrine effects may be reversed; dermatological reactions; parkinsonism-like symptoms on high dosages (in rare instances, may persist); lactation and moderate breast engorgement (in females on high dosages); and less frequently, cholestatic jaundice (use cautiously in patients with liver disease). Adverse reactions occurring rarely, include: mydriasis; agranulocytosis; skin pigmentation; epithelial keratopathy; lenticular and corneal deposits (after prolonged substantial doses).

Available: Tablets, 10 mg., 25 mg., 50 mg., 100 mg. and 200 mg.; Spansule® capsules, 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg.; Injection, 25 mg./cc.; Syrup, 10 mg./5 cc.; Suppositories, 25 mg. and 100 mg.

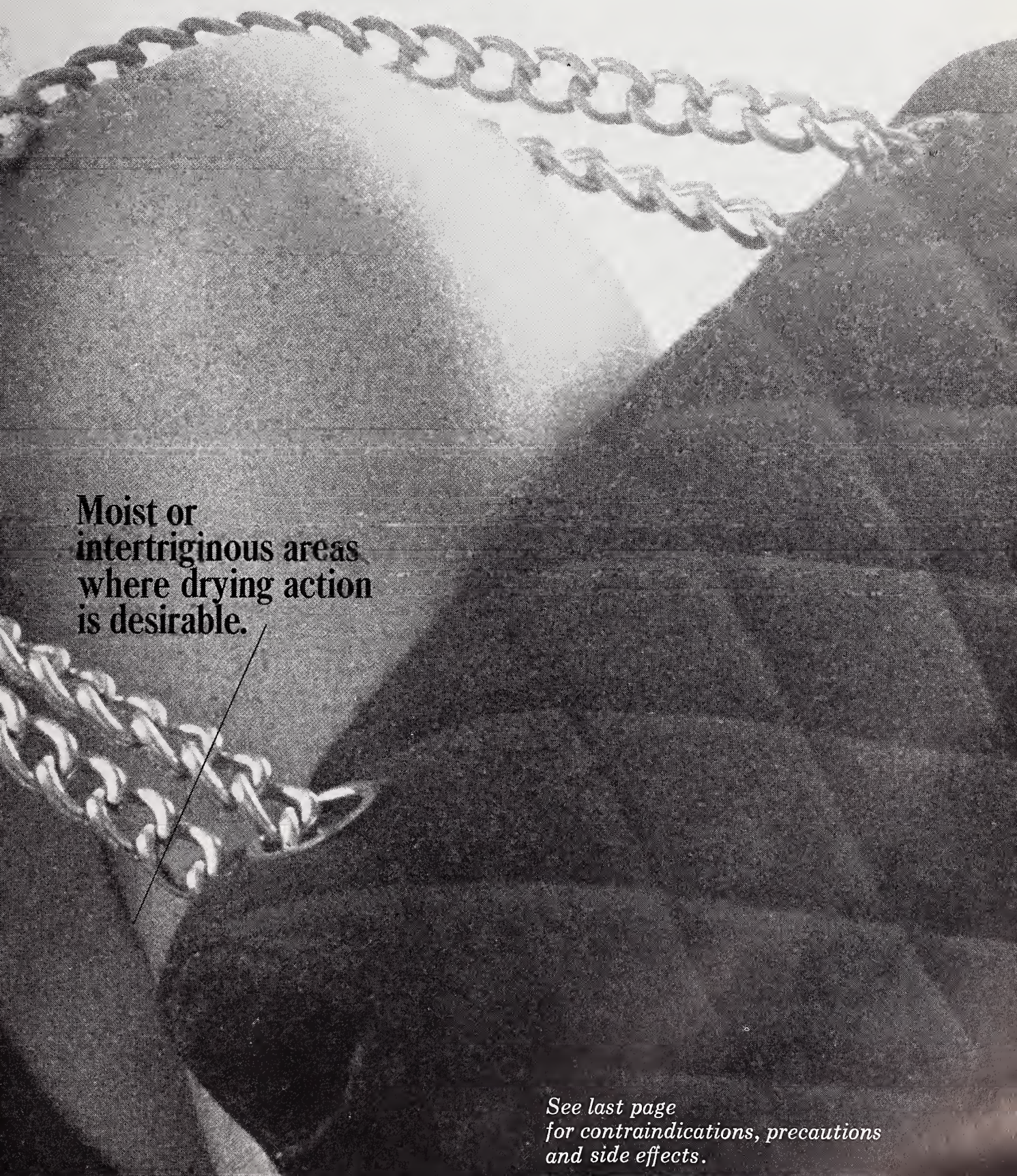
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Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use. Contraindicated in individuals with a history of hypersensitivity to any of the components.

Precautions: In some patients with dry lesions, the solution may increase dryness, scaling, or itching. Application to denuded or fissured areas, such as genital or perianal sites, may produce a burning or stinging sensation. If this persists and dermatitis does not improve, discontinue medication. Although propylene glycol has antiseptic activity, there should be careful initial evaluation and follow-up of infected sites. Incomplete response or exacerbation of lesions may be due to true infection, which requires susceptibility testing and appropriate therapy. On the other hand, saprophytic or low grade infections may clear spontaneously under the influence of Synalar Solution alone. Where severe local infection or systemic infection exists, the use of systemic antibiotics should be considered, based on susceptibility testing. While topical steroids have not been reported to have adverse effect on pregnancy, the safety of their use on pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, in large amounts, or for prolonged periods of time.

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In bacterial/allergic u.r.i., ACHROCIDIN brings the treatment together in a single prescription —prompt relief of headache and congestion together with effective control of the tetracycline-sensitive organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

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Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals.
Contraindications: History of hypersensitivity to any component.
Warning: If renal impairment exists, even usual doses may lead to liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Hypersensitive individuals may develop a photodynamic reaction to natural or artificial sunlight during use. Individuals with a history of photosensitivity reactions should avoid direct exposure while under treatment, which should be discontinued at first evidence of skin discomfort.
Precautions: Some individuals may experience drowsiness, anorexia, and slight gastric distress. If excessive drowsiness occurs, it may be necessary to increase the interval between doses. Persons on full dosage should not operate any vehicle. Use may result in overgrowth of nonsusceptible organisms. If infections appear during therapy, appropriate measures should be taken. Infections caused by beta-hemolytic streptococci should be treated for at least 10 full days to help prevent rheumatic fever or acute glomerulonephritis. Use of tetracycline during tooth development may cause discoloration of teeth.
Adverse Reactions: Gastrointestinal—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity; onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels following full therapeutic dosage has been reported. This has disappeared rapidly when drug was discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy and in children given the drug during the neonatal period, infancy, and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

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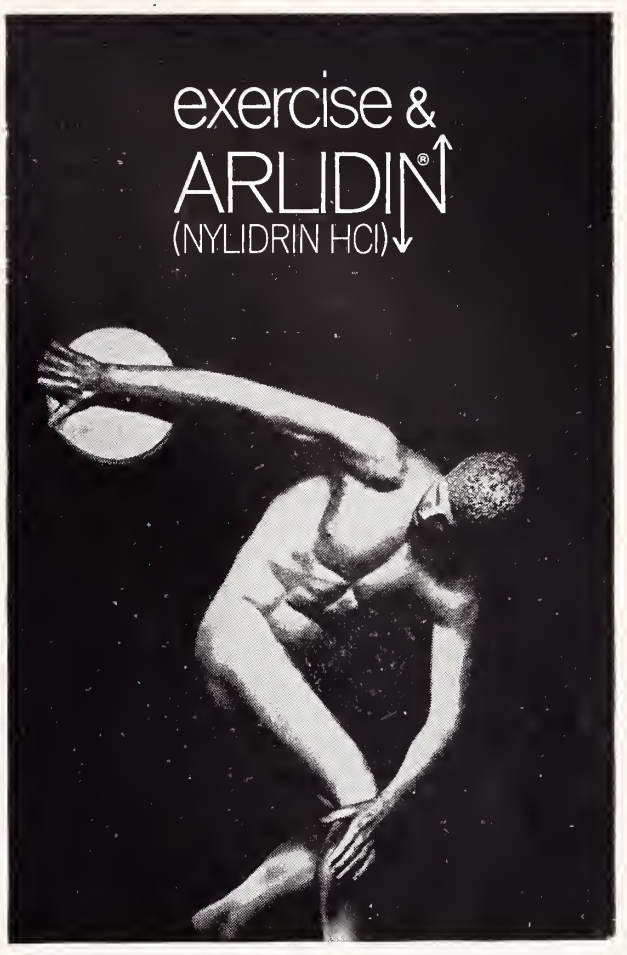
time that the job requires. One of the county supervisors conceded that a recent accident case had required the undivided attention of the medical examiner for a total of 12 hours.

The second in a series of regional mental health seminars sponsored by the Iowa Chapter of the American Academy of General Practice will be held at the Psychopathic Hospital, in Iowa City, on May 22. The program, approved for 4½ hrs. of Category I credit by the AAGP, will consist of the following presentations: "Psychedelic Drugs," by **Albert S. Norris, M.D.**, professor of psychiatry; "The Taboo of Suicide," by **Russell Noyes, M.D.**, assistant professor of psychiatry; "Current Trends in Psychopharmacology" by **Richard Finn, M.D.**, assistant professor of psychiatry; and a panel discussion on drug therapy in which **Dr. Paul E. Huston,** head of the U. of I. Department of Psychiatry, and the three previous speakers will participate.

The Crawford County Medical Society and the Iowa Chapter of the American Academy of General Practice will conduct a regional seminar at the Country Club in Denison, on Thursday, May 2. The scientific program will begin at 1:20 p.m., and will consist of the following presentations: "The Acute Abdomen," by **Wilhelm Klumper, M.D.**, of Cherokee; "When, Where, How and What of a D&C," by **William L. Rumbolz, M.D.**, of Omaha; "Regional Medical Programs and Comprehensive Health Planning as Related to the General Practitioner," by **Dan A. Nye, M.D.**, of Kearney, Nebraska; "Neonatal Chest Emergencies," by Dr. Klumper; "Recent Advances in the Management of the Rh Negative Patient," by Dr. Rumbolz; and "How I Diagnose and Manage the Acute Coronary," by Dr. Nye. It, too, has been approved for 4½ hours of Category I credit by the AAGP.

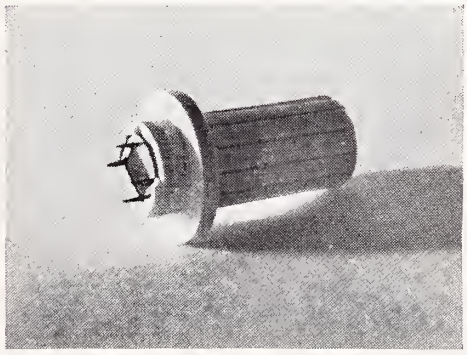
Dr. Norman L. Reitzel, of Vinton, and **Dr. James Gannon,** of Laurens, have been elected to active membership in the American Academy of General Practice.

From January to March of this year, according to an article by **Dr. Joseph A. Buckwalter**, a professor of surgery at the U. of I. College of Medicine and head of the Iowa Central Tumor Registry, in an article in the March-April issue of HAWKEYE GP NEWS, The U. of I. Department of Surgery and the American Cancer Society, Iowa Division, Inc. have conducted five refresher courses in proctosigmoidoscopy for private practitioners. Each was conducted on a Wednesday afternoon, and registration was limited to five. Instruction was finished in time for the enrollees to attend a CPC or a College of Medicine lecture. The lecturers were **Dr. Donal Dunphy,** head of



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pediatrics at the U. of I., who spoke on "Proctosigmoidoscopy: a Part of the Physical Examination"; and **Dr. Warren Cole**, head of surgery at the University of Illinois College of Medicine, who discussed "Management of Cancer of the Colon and Rectum." The physician-students each performed a sigmoidoscopic examination with the Welsh-Allyn and Fiber-optic sigmoidoscopes upon a patient having indications for the procedure.

Dr. Buckwalter reported that in 70 per cent of patients, cancer of the colon and rectum can be diagnosed by proctosigmoidoscopy, and that with early diagnosis there is a 70 per cent chance for a five-year cure.

At the 110th annual meeting of the Missouri State Medical Association, in Kansas City late in March, **Dr. Paul Ferguson**, of Lake City, served on a panel that discussed medicine and religion. According to the March 28 issue of the LAKE CITY GRAPHIC the panelists covered an extraordinary range of topics, however, including alcoholism, drug addiction, drugs on the campus, and contraceptives and the coed. On March 1, Dr. Ferguson had attended an area meeting for state chairmen of Medicine and Religion Committees in Chicago, where he headed a discussion on workshop experience at the state level.

The American Cancer Society, Iowa Division, Inc. and the Iowa Nursing Home Association conducted two more of their cancer conferences for nursing-home personnel early in April. They took place at Clinton on April 3 and at Ames on April 5, and the principal speakers were **Virginia Barkley, R.N.**, of New York City, nursing consultant for the American Cancer Society, and **Dr. Addison W. Brown**, a Des Moines gynecologist and a past-president of the Iowa Division.

Dr. Mark D. Ravreby, a Des Moines internist, will graduate from the Drake University Law School in June.

Dr. Jonathan Cohen, an assistant clinical professor of orthopedic surgery at the Harvard Medical School, presented the annual Steindler Memorial Lecture at the U. of I. College of Medicine on April 3. His lecture was entitled "Effect of Radiation on Bone." **Dr. Arthur Steindler** was a world-renowned orthopedic surgeon who headed the U. of I. Department of Orthopedics for nearly 35 years.

A curious grey area in medical ethics was brought into focus in Tipton at the end of March when a deputy sheriff had reason to believe that thieves who had stolen two pickup trucks in or near there had sustained bodily injuries when they wrecked them—about five blocks from St. Luke's Methodist Hospital, in Cedar Rapids, in one instance. According to the deputy sheriff, the physicians whom he questioned did not deny that they had treated anyone for injuries which had been, or might have been, incurred during the commission of such a theft, but contended that any such information would not necessarily be in the same category as data regarding gunshot wounds, and thus would be privileged.

At the April 17 meeting of the Polk County Medical Society, held in the Argonne Armory, Des Moines, **Dr. Arthur P. Long**, the state commissioner of health, served as coordinator of a panel discussion of the role of the private physician in chronic-disease programs. The panelists were **Mrs. Allan B. Phillips**, of the IMS Woman's Auxiliary, who spoke on the Home Care-Homemaker Service; **Marilyn Russell**, R.N., who was spokesman for the public health nurses; **Dr. William D. deGravelles**, a physiatrist, whose topic was out-of-hospital service; and **Dr. John K. Uchiyama**, a generalist, who discussed the attending physician's role. The members of the Polk County Society toured the facilities of the Des Moines-Polk County Health Department, which are located in the Argonne Armory.

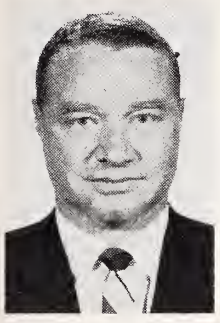
At the annual meeting of the American College of Physicians, in Boston early in April, **Dr. Elmer L. DeGowin**, a professor of internal medicine at the U. of I. College of Medicine, was reelected to a three-year term on the organization's Board of Governors.

Dr. Richard Wilker is to go to Vietnam on May 15 for a year's duty as a captain in the Army Medical Corps. He had been practicing in Creston since 1960 when he entered military service at Ft. Sam Houston, Texas, last fall.

Dr. Robert Durnin, an assistant professor of pediatrics at the U. of I. College of Medicine spoke on "Evaluation of Murmurs in School-Age Children" and "Approach to Heart Disease in Infants" at a meeting sponsored by the Northwestern Division of the Iowa Heart Association and the Sioux Valley Medical Association, at the Sheraton-Warrior Hotel, Sioux City, in mid-March.

A first-year resident in surgery at University Hospitals, Iowa City, **Dr. John R. Mountjoy**, has been declared first-prize winner in the Tenth Annual SAMA-Eaton Medical Photography Awards for his "Paget's Disease of the Nipple With Carcinoma." He is to receive a $250 prize and a commemorative plaque. Dr. Mountjoy won third prize in last year's competition.

Dr. Richard Loren Vaught recently joined **Drs. Lawrence E. Pierson** and **John A. McFarlane** in the practice of urology in Sioux City. Dr. Vaught took his M.D. at the University of Indiana Medical School in 1958, interned at the U. S. Naval Hospital in St. Albans, Long Island, and stayed on to take his residency training there. Subsequently he served at Naval Hospitals in Beaufort, South Carolina (1963-1965), and San Diego (1965-1968). At the latter institution he was assistant chief of urology and head of pediatric urology. He has recently attained the status of fellow in the American Academy of Pediatrics, as an affiliate in pediatric urology.



Dr. Vaught

The Jones County Medical Society recently presented **Dean Robert B. Hardin,** of the U. of I. College of Medicine, a check for $500 for use in medical education. The sum represented what remained of contributions received at tetanus-immunization clinics, after the expenses were paid. Medical-school executives are always happiest to receive non-earmarked funds.

Dr. James Hardy, an associate professor of pediatrics and of speech pathology and audiology at the U. of I. College of Medicine, lectured on "Aerodynamic-Mechanical Model for Speech Breathing Research" at Gainesville, Florida, on March 20. His was one of a series of addresses being sponsored by the Communication Sciences Laboratory of the University of Florida.

Four research papers were presented by faculty members of the U. of I. Department of Otolaryngology and Maxillofacial Surgery at the annual meeting of the American Laryngological, Rhinological and Otological (Triological) Society, April 24-26, in Hollywood Beach, Florida. **Dr. Barry J. Anson,** a research professor, is a co-author of two of the papers, "Sensorineural Considerations," to be given before the American Otological Society, and "Histology of Surgically Excised Stapes," before the Otological section. **Dr. James R. Leonard,** an assistant professor, will report on "Combined Radiation and Surgical Therapy of the Tongue, Tonsil and Floor of the Mouth" at a session of the American Rhinological Society. Co-authors of that report are **Drs. Ward B. Litton,** an associate professor, **Brian F. McCabe,** a professor of otolaryngology, and **Howard B. Latourette,** a professor of radiology.

A thesis by Dr. Litton, "Epidermal Migration in the Ear—The Location and Characteristics of the Generation Center Revealed by Use of a Radioactive DNA Precursor," was one of three cited by the Society as "distinguished by its excellence."

Dr. Leslie Bernstein, an associate professor of Otolaryngology and Maxillofacial Surgery, was presented the Triological Society's Harris P. Mosher Award for his paper "The Effect of Timing of Cleft-Palate Operations on Subsequent Growth of the Maxilla."

Dr. Dean M. Lierle, professor emeritus of otolaryngology and maxillofacial surgery at the U. of I. was guest of honor at the meeting of the American Academy of Facial Plastic and Reconstructive Surgery, Inc., in Hollywood Beach April 27-30. He lectured on "Plastic and Reconstructive Surgery in Otolaryngology." Dr. Bernstein served as moderator of a panel discussion on "Management of Facial Fractures," and presented a paper on "Management of Velopharyngeal Incompetence," including an assessment of 180 cases.



Dr. Lierle Dr. Bernstein

Dr. R. Giles Gillett plans to leave Sigourney on June 15, to join **Dr. Robert F. Crockett** in practice at Kingsburg, California. During the past two or three months **Dr. Pueangtong Jutabha** has worked with Dr. Gillett in Sigourney, and on June 15 her husband, **Dr. Opas Jutabha,** will leave the staff of the Veterans Administration Hospital in Iowa City to replace Dr. Gillett. The Jutabhas are Thai nationals.

Dr. John K. Dickinson, who has been assistant superintendent of the Iowa Security Medical Facility for the past 2½ years and was recently made a clinical assistant professor of psychiatry at the U. of I. College of Medicine, has been promoted to the post of superintendent of the hospital, which currently serves 80 adult male mental patients within the walls of the State Reformatory, in Anamosa. He took his M.D. at the University of Illinois College of Medicine, and got his psy-

chiatric training in Iowa City. A new 93-bed maximum-security hospital is under construction at Oakdale, and a year from now it will replace the one in Anamosa—more appropriately, since some of the men who must be thus cared for are not felons. It will serve also as a training center and a center for research in the care and treatment of dangerous psychotics.

The Woman's Auxiliary to the Polk County Medical Society has three extraordinary new members. They are **Mrs. Royal S. Anspach, Mrs. John I. Hostetter** and **Mrs. John K. Uchiyama.** They also are members of the Polk County Medical Society, and professionally they are, respectively, **Dr. Ellen E. Ferengul, Dr. Mary S. Hostetter** and **Dr. Mary Louise Lyons.**

Deaths

Dr. Donald F. Mirick, 49, a Clinton obstetrician, was fatally injured in a two-car collision 5½ miles north of Fulton, Illinois, at 7:25 p.m. on March 23. A car approaching his and trying to pass a truck, sideswiped his vehicle. He was dead on arrival at Jane Lamb Hospital, Clinton.

Dr. Arthur S. Bowers, 89, who practiced medicine in Orient for 63 years before retiring in 1966, died at Memphis, Tennessee, on March 17. He had moved there after his retirement. He was a Life Member of the Iowa Medical Society.

Dr. Ralph Lovelady, 79, who practiced medicine at Sidney for more than 50 years, died at a hospital in Omaha on March 5. A graduate of the Creighton University Medical School, he spent his entire life in Fremont County, except for the time it took him to get his college and medical education, and for his service in World Wars I and II.

Dr. Harold T. Werner, 61, who had practiced medicine in Ft. Madison for about 30 years, died on March 26 at Sacred Heart Hospital, there. He had been in failing health for some time, but was hospitalized only two or three hours before he died. He was a medical graduate of Washington University, St. Louis.

Dr. Carl A. Heise, 57, of Waco, Texas, died there on March 12, after a lengthy illness. He practiced at Jewell from 1946 until about four or five years ago. Burial took place at Missouri Valley. His brother, Dr. Robert Heise, practices in Story City.

Dr. Harry H. Ennis, 87, who headed the district office of the State Department of Health in Manchester and conducted a general practice in Baxter until his retirement a few years ago, died in Iowa City on April 4.

U. of I. Study Supports Genetic Theory of Schizophrenia

Are schizophrenics made or born? According to research findings of a University of Iowa psychiatrist, Dr. Leonard L. Heston, they probably are born and do not develop their disorder as a result of exposure to a family life distorted by mentally-ill relatives.

A conclusive answer regarding the origin of schizophrenia has long been sought. Knowing where and how the illness originates would be basic to improving diagnosis and treatment. Some researchers have felt that its origin is environmental—in the elaborate and often precarious formation of personality during childhood. Others have felt it is caused by a faulty physiological heritage, with the seeds of the illness being passed from parents to offspring through genes, the bearers of heredity.

Dr. Heston's study, the first of its kind, adds strong support to the heredity theory. Three others done subsequently in Denmark have now confirmed his findings. To narrow the possibilities, Dr. Heston studied 47 persons born to schizophrenic mothers but reared from birth in adoptive or foster homes by persons without schizophrenic backgrounds. "If the environmental theory were true, then only one per cent of the persons—the same percentage as in the general population—should have experienced schizophrenia, because they had been removed from the environmental influences of a mentally disturbed family life," Dr. Heston reasoned. His study revealed however, that about 15 per cent of the study group developed schizophrenia, and 35 per cent suffered from severe neurosis, sociopathic personality disturbances and alcoholism. No schizophrenia was detected in a control group of 50 persons who also were adopted and reared in foster homes, but who came from families that had no background of the mental illness.

"While we can successfully treat schizophrenia with drugs—another indication that the root of the problem has a biological nature—genetic manipulation to prevent or cure the disorder is a long way in the future," Dr. Heston says. His study turned up an unexpected finding. Although nearly 50 per cent of the study group suffered from some type of mental or personality problem, the rest had more adaptable personality traits and possessed special talents in several instances. "They held the more creative jobs, such as musician, teacher, home-designer, and followed the more imaginative and creative hobbies," Dr. Heston commented.

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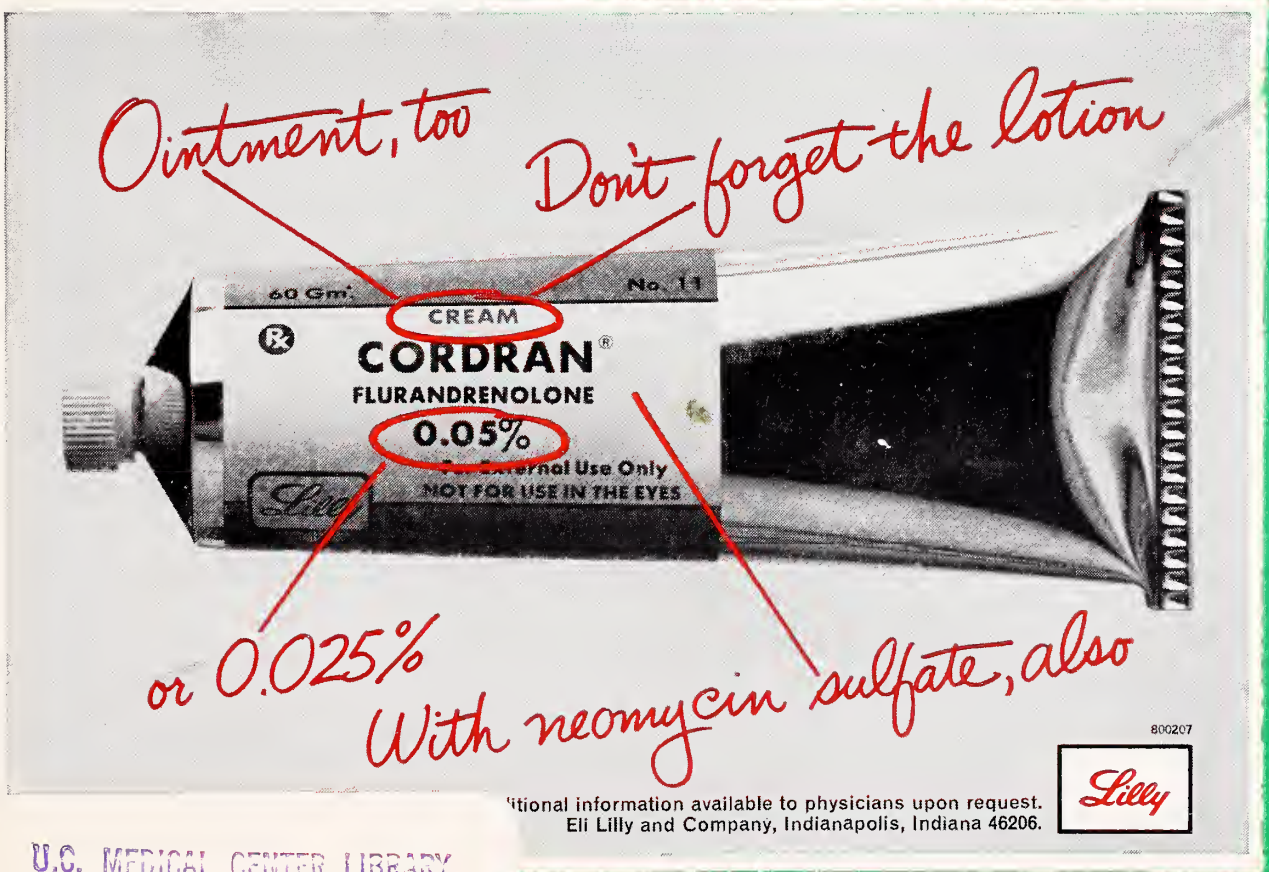
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- Hyperinsulinism: A Report of 12 Cases at the University of Iowa Hospitals—R. T. Soper, M.D., T. H. Koch, J. A. Gius, M.D., and R. D. Liechty, M.D., Iowa City
- The Contraceptive Polyp: A Diagnostic Dilemma—William R. Anderson, M.D., and Allan J. Levine, M.D., Iowa City
- Recommendations to Iowa Physicians on the Prevention of Tuberculosis
- Measles (Rubeola) Elimination in Polk County —Julius C. Conner, M.D., M.P.H., Paul M. Pietzsch and Kent M. Forbes, Des Moines
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 496—Abdominal Pain, Dicumarol, Shock



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Vol. LVIII June, 1968 No. 6

CONTENTS

SCIENTIFIC ARTICLES

Hyperinsulinism: A Report of 12 Cases at the University of Iowa Hospitals
R. T. Soper, M.D., T. H. Koch, J. A. Gius, M.D., and R. D. Liechty, M.D., Iowa City . . . 579

The Contraceptive Polyp: A Diagnostic Dilemma
William R. Anderson, M.D., and Allan J. Levine, M.D., Iowa City 585

Recommendations to Iowa Physicians on the Prevention of Tuberculosis 589

Measles (Rubeola) Elimination in Polk County
Julius S. Conner, M.D., M.P.H., Paul M. Pietzsch and Kent M. Forbes, Des Moines . 592

University of Iowa College of Medicine Clinical Pathologic Conference No. 496 (Abdominal Pain, Dicumarol, Shock) 597

EDITORIALS

A Fish Story 609

Two Articles That You Shouldn't Miss Reading 609

Deaths from Asthma 610

Obesity 612

Smoking and Health 614

The Need for Repeated Drills in the Management of Mass Casualties 614

SPECIAL DEPARTMENTS

Coming Meetings 563

Month in Washington 566

President's Page 616

Medical History 617

Doctor's Business 622

In the Public Interest facing page 622

Journal Book Shelf 623

Iowa Association of Medical Assistants . . . 625

State Department of Health 626

Woman's Auxiliary News 630

Personals 635

Deaths 646

MISCELLANEOUS

A New Trick Tried by Drug Addicts 608

Regents Approve 17.5 Million U. of I. Hospital Project 621

Resource Facility in Biomedical Engineering . . 624

Water Sport Safety 629

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COMING MEETINGS

IN STATE

June 10-14 **Basic Principles in Internal Medicine, American College of Physicians and University of Iowa College of Medicine,** Iowa City.

June 17-19 **Iowa Chapter, American Academy of General Practitioners, Spring Postgraduate Conference,** New Inn, Okoboji.

CONTINENTAL U. S.

June 3-4 **Neuromuscular Diseases of Children with Special Emphasis on Management, Cook County Graduate School of Medicine,** Chicago.

June 3-7 **Fifteenth Annual Anesthesiology Review Course,** Wilford Hall USAF Hospital, Lackland Air Force Base, Texas.

June 5-8 **Alaska State Medical Association,** Anchorage-Westward Hotel, Anchorage.

June 10-13 **American Proctologic Society,** Denver Hilton, Denver.

June 10-14 **Postgraduate Course in Obstetrics and Gynecology,** University of Colorado School of Medicine, Denver.

June 11-15 **American Therapeutic Society, 2nd Session,** St. Francis Hotel, San Francisco.

June 12 **Pediatric Symposium,** Statler-Hilton Hotel, Los Angeles.

June 13-15 **Highlights in Modern Ophthalmology,** Pacific Medical Center, San Francisco.

June 13-15 **Third Biennial Scientific Meeting, California Society of Anesthesiologists,** Mark Thomas Inn, Monterey, California.

June 13-16 **American Association of Neuropathologists,** Washington-Hilton, Washington, D. C.

June 13-17 **American College of Chest Physicians,** Hilton Hotel, San Francisco.

June 14-15 **American Rheumatism Association,** Olympic Hotel, Seattle.

June 15 **Congress on Medicine and Insurance co-sponsored by the Association of Life Insurance Medical Directors of America and the American Medical Association,** Fairmont Hotel, San Francisco.

June 15-16 **American Diabetes Association,** Sheraton-Plaza, San Francisco.

June 16 **American College of Legal Medicine, Professional—Clinical Meeting,** San Francisco Hilton Hotel, San Francisco.

June 16-20 **American College of Preventive Medicine,** San Francisco.

June 16-20 **American Medical Association,** Fairmont Hotel, San Francisco.

June 17-19 **Intensive Care Units,** University of Colorado Medical Center, Denver.

June 17-19 **American Neurological Association,** Washington-Hilton, Washington, D. C.

June 17-20 **Postgraduate Course in Obstetrics and Gynecology sponsored by University of Colorado School of Medicine,** Estes Park.

June 18-19 **American Medical Women's Association, Interim Meeting,** Waldorf-Astoria, New York.

June 19-21 **Infectious Disease: Mechanisms and Manifestations, University of Maryland School of Medicine,** Baltimore.

June 21-22 **Two-day Medical Writing Course, University of California,** San Francisco Medical Center, San Francisco.

June 26-28 **Pediatric Seminar,** Hanalei Hotel, San Diego.

June 26-28 **Children's Hospital Summer Clinics,** Vail, Colorado.

July 8-11 **Postgraduate Course in Ophthalmology sponsored by University of Colorado School of Medicine,** Estes Park, Colorado.

July 15-18 **Medical Record Librarian Conference sponsored by University of Colorado School of Medicine,** Estes Park, Colorado.

July 21-27 **Fourteenth Annual General Practice Review sponsored by University of Colorado School of Medicine,** Denver.

July 22-24 **9th American Medical Association Air Pollution Medical Research Conference,** Denver-Hilton Hotel, Denver.

ABROAD

June 8-12 **American Therapeutic Society,** Kahala Hilton, Honolulu.

June 26-29 **Sectional Meeting of American College of Surgeons,** Munich, Germany.

June 30-July 6 **Third International Seminar and Exhibition —Theme "World Problems in Rehabilitation of the Disabled,"** Hotel Metropole Conference Centre, Brighton, England.

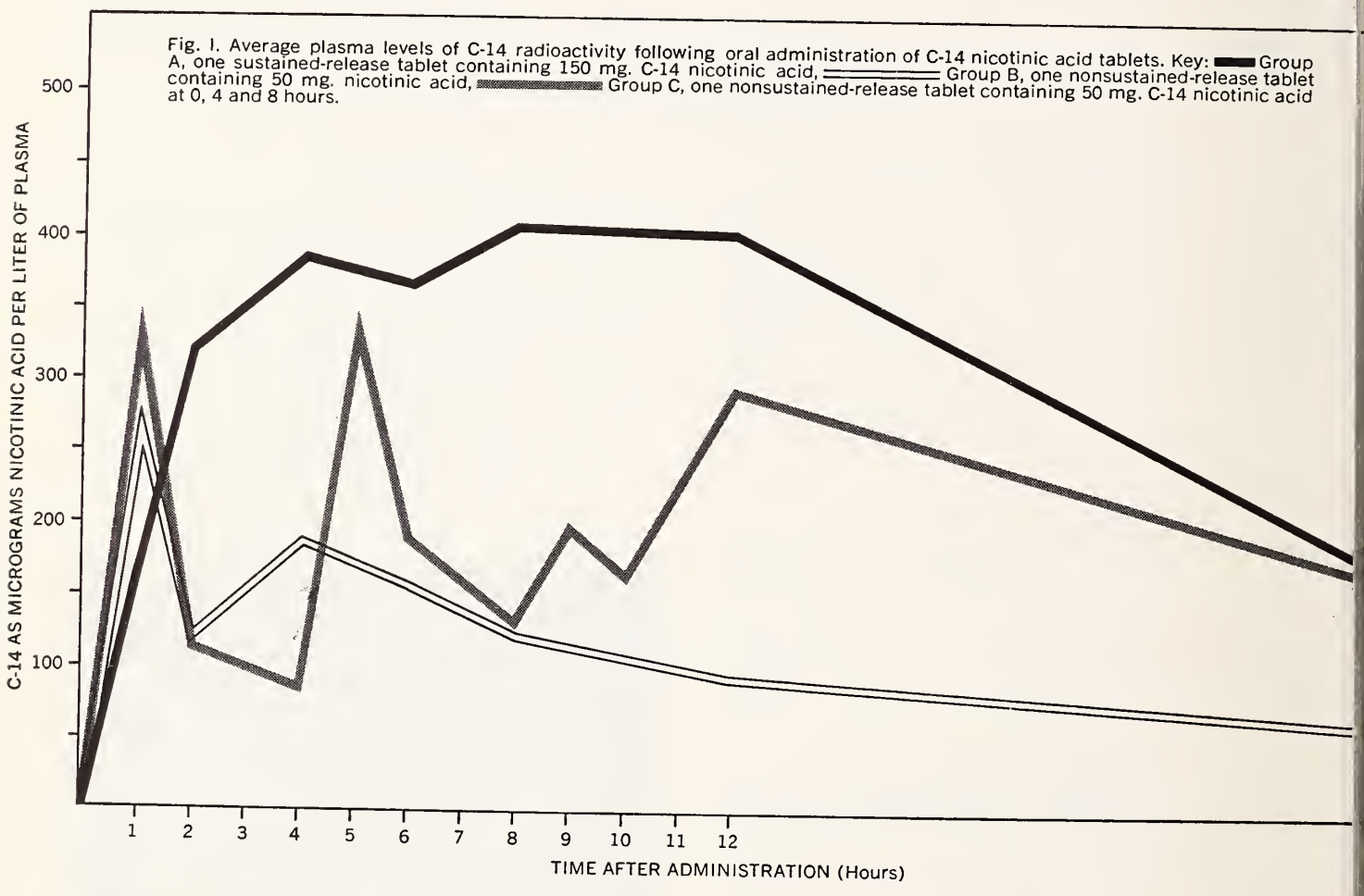
Aug. 26-29 **Second Western Hemisphere Nutrition Congress (Co-sponsors: American Institute of Nutrition; Latin American Nutrition Society; Nutrition Society of Canada),** Americana Hotel, San Juan, Puerto Rico.



At the annual IMS banquet, Dr. W. M. Fowler (left), a professor of internal medicine at the U. of I. College of Medicine, received a plaque emblematic of the Ben T. Whitaker Interstate Teaching Award from Mr. Roy Ragatz, of Madison, Wisconsin, executive secretary of the Interstate Postgraduate Medical Association.

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Fig. I. Average plasma levels of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. nicotinic acid, ▬▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.





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Geroniazol TT improves the typical, unfortunat signs of senile confusion. Patients become more aler

ged and debilitated

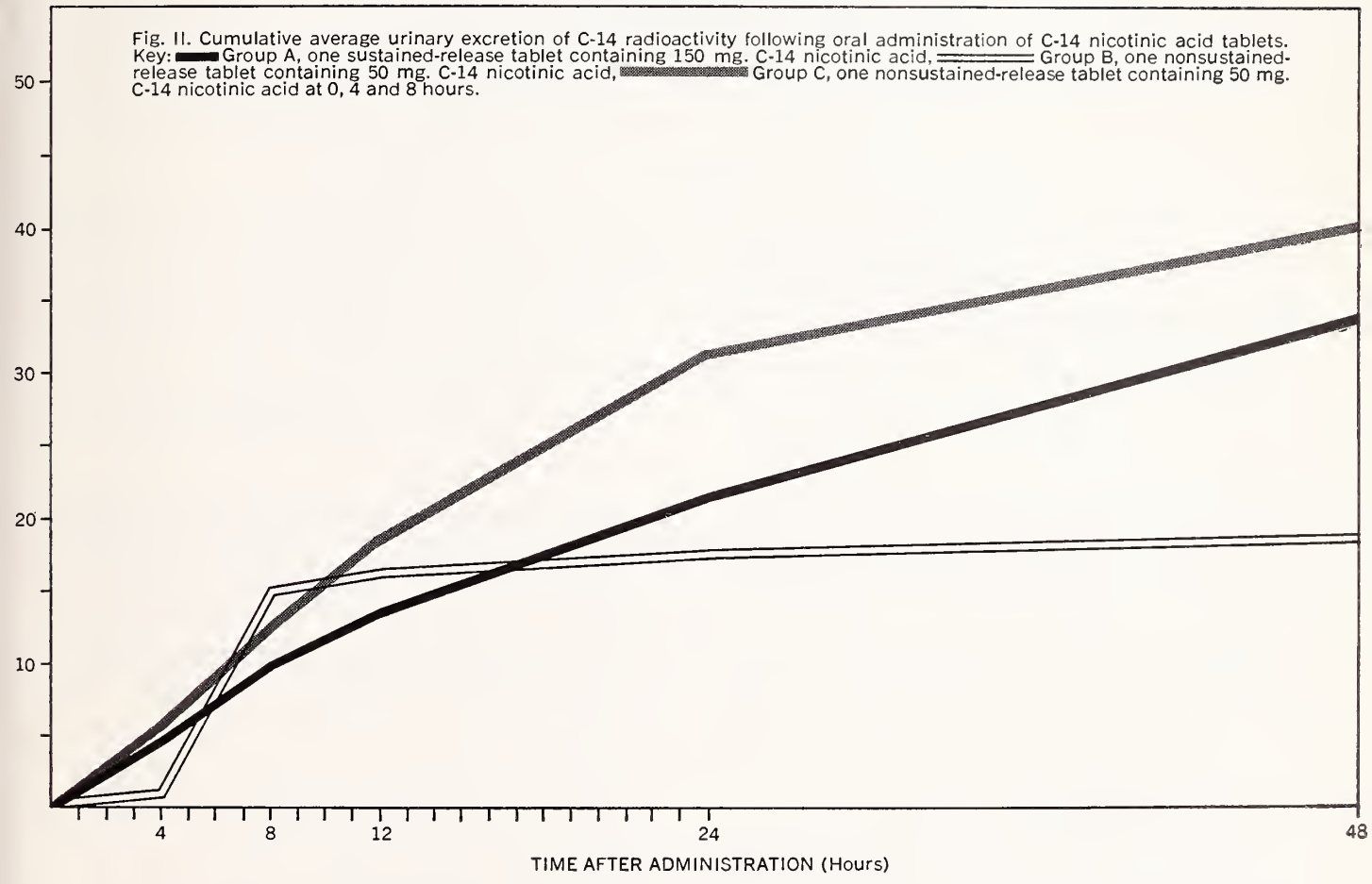


Fig. II. Cumulative average urinary excretion of C-14 radioactivity following oral administration of C-14 nicotinic acid tablets. Key: ▬ Group A, one sustained-release tablet containing 150 mg. C-14 nicotinic acid, ═══ Group B, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid, ▬ Group C, one nonsustained-release tablet containing 50 mg. C-14 nicotinic acid at 0, 4 and 8 hours.

ss confused and moody. Personal care, memory, motional stability, social attention improve. Fatigue, pathy and irritability are reduced.

A prescription for 100 tablets of Geroniazol TT will ermit your patients to enjoy the benefits of time-rolonged nicotinic acid/pentylenetetrazol therapy, t an economical price. Dosage is only one tablet every 2 hours.

ontraindications: There are no known contraindications.

recautions: Exercise caution when treating patients ith a low convulsive threshold.

Side Effects: Side effects are rarely encountered, however due to the vasodilatation effect of nicotinic acid, transitory mild nausea, flushing, tingling and pruritus are possible.

Dosage: One tablet every 12 hours.

Supplied: Prescribe bottles of 100 tablets, to take advantage of recent price reduction.

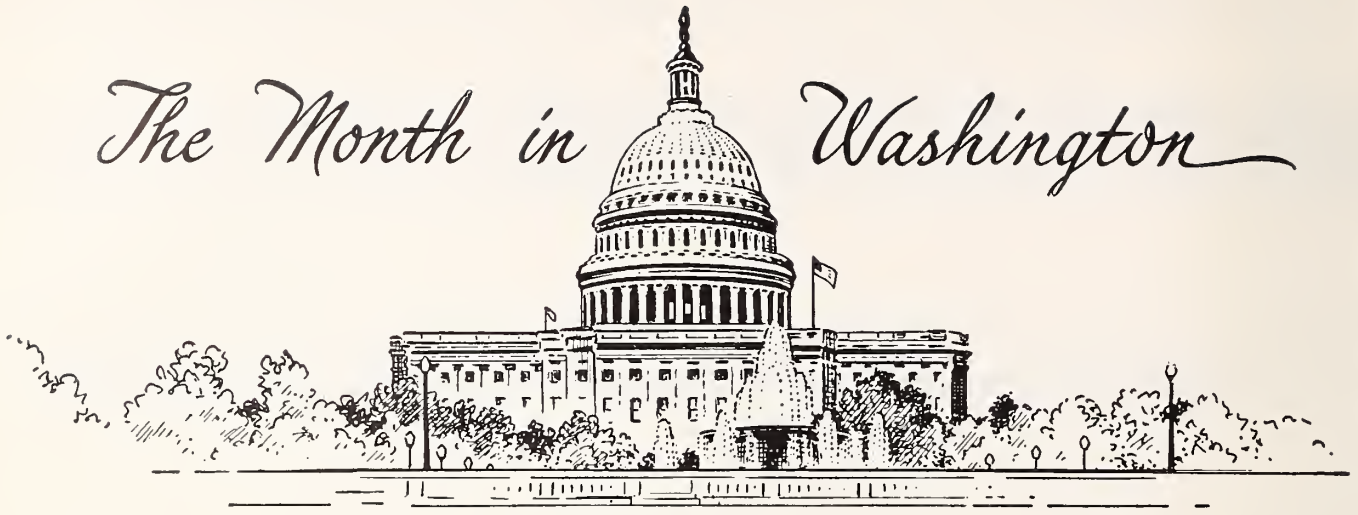
References: 1. Report by Nuclear Science & Engineering Corp., Pittsburgh, Pa., in files of Philips Roxane Laboratories. 2. Connolly, R.: W. Virginia Med. J. *56*:263 (Aug.) 1960. 3. Curran, T. R., and Phelps, D. K.: Am. Pract. & Digest Treat. *11*:617 (July) 1960.

"First with the Retro-Steroids"
PHILIPS ROXANE LABORATORIES
Division of Philips Roxane, Inc., Columbus, Ohio
A Subsidiary of Philips Electronics and Pharmaceutical Industries Corp.

Geroniazol® TT

nicotinic acid 150 mg., pentylenetetrazol 300 mg.
Tempotrol® Time Controlled Tablet

The Month in Washington



Washington, D. C.—The federal government has established a new agency and appointed two new advisory committees in the health care field. The new agency is the National Center for Health Services Research and Development. The committees are:

1. The Medical Assistance Advisory Council that will advise the secretary of Health, Education and Welfare on matters relating to federal-state medical aid programs.

2. A panel to give the social security commissioner advice on experiments to find new methods of reimbursing hospitals and physicians for health care under Medicare and other federal health programs.

Health, Education and Welfare spokesmen said the new center will work with universities, industry, hospitals, practitioners and research institutions in seeking new ways of delivering health care. It was authorized by Congress last year at the Johnson Administration's request.

"The ultimate goal of the center is to help practitioners and institutions involved in health services improve the distribution and quality of services and make the best possible use of manpower, funds, and facilities," said Dr. Philip R. Lee, assistant HEW secretary for health and scientific affairs.

The immediate goals of the center were listed as:

—More efficient utilization of health personnel, including the development of new types of health workers at the professional, technical and auxiliary levels.

—Increased productivity and better management of all elements of the medical care system to improve quality and moderate the rapidly rising costs.

—Technological innovation, for immediate application, to achieve cost reduction and quality improvement.

—To survey and analyze health systems, including costs and financing, and to test new concepts and systems of health-care delivery.

—To recruit, train and develop personnel for health-services research, including the establishment of regional, non-federal centers for health-services research and training.

—To collect and correlate existing information on health services delivery for planning and organization design.

—To initiate studies of institutional design, construction, equipment and maintenance and to support construction of cost-saving innovations.

The director of the center, which is under the newly created Health Services and Mental Health Administration, is Dr. Paul J. Sanazaro, who had directed education and medical care research for the Association of American Medical Colleges since 1962.

HEW said the advisory council would be consulted on program development and practical operational problems involved in Medicaid (Title XIX of Social Security). Such programs are in operation in 38 states, Guam, Puerto Rico and the Virgin Islands. Rashi Fein, Ph.D., a chief economist at the Brookings Institution, was named chairman of the 21-member council, which includes six physicians. Those doctors of medicine are: John B. Farley, Pueblo, Colorado; Thomas B. Georges, a Pennsylvania health and welfare official; Amos N. Johnson, Garland, North Carolina; Maynard Shapiro, Chicago, president-elect of the American Academy of General Practice; George W. Slagle, Battle Creek, Michigan, chairman of the American Medical Association's Council on Medical Service, and Donald Smith, a professor of public health at the University of Michigan.

The Social Security Administration said the reimbursement panel would review proposals for experiments submitted by institutions and individuals in the health care and health insurance fields. After such reviews, it will be asked to recommend the ones it believes to have the greatest potential.

Nathan J. Stark, a Kansas City, Missouri, businessman, is chairman of the 17-member group. Four members are physicians; Solomon J. Axelrod, University of Michigan; Thomas W. Georges,

(Continued on page 569)

when you want to provide the combined benefits of two accepted agents in the treatment of mild to moderate hypertension. (Contraindications: history of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.)

when you want to prescribe therapy that is generally well tolerated.

(However, adverse reactions may occur. For a complete listing, please refer to the full prescribing information which is summarized below.)

when your patient wants an easy-to-remember and reasonably priced regimen. (One tablet a day usually costs about a dime.)

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue 1 week before electroshock therapy, and if depression or peptic ulcer occurs. **Use in pregnancy:** Regroton should be used in pregnant patients or in women of childbearing potential only when, in the judgment of a physician, its use is deemed essential to the welfare of the patients; adverse reactions (thrombocytopenia, hyperbilirubinemia, altered carbohydrate metabolism, etc.) are potential problems in the newborn. **Precautions:** Antihypertensive therapy with Regroton should always be initiated cautiously in post-sympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue Regroton therapy two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, Regroton should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000. **For details, see complete Prescribing Information.** (B)46-600-B

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

Regroton® **Geigy**

When it's more than a bad cold



your patient can feel better while he's getting better

Achrocidin®

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen citrate 25 mg.

In bacterial/allergic u.r.i., ACHROCIDIN brings the treatment together in a single prescription—prompt relief of headache and congestion together with effective control of the tetracycline-sensitive organisms frequently responsible for complications leading to prolonged disability in the susceptible patient.

For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN (Tetracycline) equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Average adult dosage: 2 tablets four times daily, given at least one hour before, or two hours after meals.
Contraindications: History of hypersensitivity to any component.
Warning: If renal impairment exists, even usual doses may lead to liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. Hypersensitive individuals may develop a photodynamic reaction to natural or artificial sunlight during use. Individuals with a history of photosensitivity reactions should avoid direct exposure while under treatment, which should be discontinued at first evidence of skin discomfort.
Precautions: Some individuals may experience drowsiness, anorexia, and slight gastric distress. If excessive drowsiness occurs, it may be necessary to increase the interval between doses. Persons on full dosage should not operate any vehicle. Use may result in overgrowth of nonsusceptible organisms. If infections appear during therapy, appropriate measures should be taken. Infections caused by beta-hemolytic streptococci should be treated for at least 10 full days to help prevent rheumatic fever or acute glomerulonephritis. Use of tetracycline during tooth development may cause discoloration of teeth.
Adverse Reactions: Gastrointestinal—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes (a case of exfoliative dermatitis has been reported); photosensitivity; onycholysis and discoloration of nails (rare). Kidney—rise in BUN, apparently dose related. Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. In young infants, bulging fontanels following full therapeutic dosage has been reported. This has disappeared rapidly when drug was discontinued. Teeth—dental staining (yellow-brown) in children of mothers given tetracycline during the latter half of pregnancy and in children given the drug during the neonatal period, infancy, and early childhood. Enamel hypoplasia has been seen in a few children. Blood—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. Liver—cholestasis (rare), usually at high dosage. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy.

Lederle

350-8

(Continued from page 566)

Jr., a Pennsylvania welfare official; Donald R. Hayes, Springfield, Massachusetts; and Pierre J. Salmon, San Mateo, California, a county public health and welfare official.

* * *

The American Medical Association urged that Congress appropriate maximum amounts for support of medical education. The AMA position was outlined by Dr. C. H. William Ruhe, director of its Division of Medical Education, at a hearing of a House appropriations subcommittee.

"We recognize the present concern of the Congress and the nation for an overall reduction in federal expenditures," Dr. Ruhe said. "However, we believe that the urgent need for more physicians merits the funding, to the fullest extent possible, of legislation supporting medical education. . . .

"An urgent need exists in this country for more physicians to meet the health care needs of the American public. This need can be met effectively only by a major increase in the capacity of American medical schools to educate more physicians."

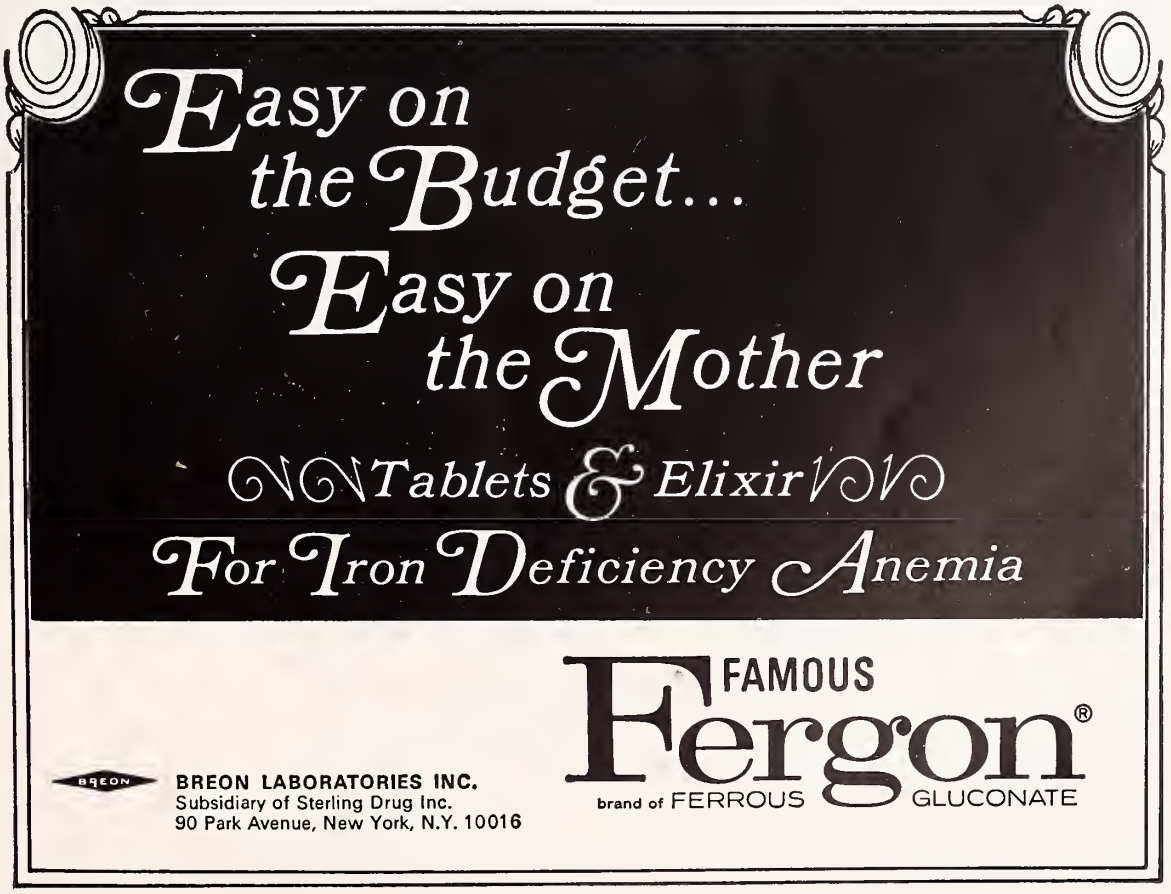
Dr. Ruhe noted that federal aid to medical schools under the proposed Health Manpower Act of 1968 would not become available before 1970. Therefore, he said, efforts must be made to secure the essential immediate increase in financial support through increased appropriations under existing law. He listed the Health Professions Educational Assistance Act, the Health Research Facilities Construction Act, the Medical Act, and the general research support authority of the National Institutes of Health.

* * *

Governor Nelson Rockefeller, of New York, and two other witnesses at a Senate subcommittee hearing supported national compulsory health insurance as a solution of the problem of rising health care costs. The other witnesses were Olcott D. Smith, chairman of Aetna Life and Casualty Company, who expressed belief that private companies could work with the government effectively on such a program, and economist Victor Fuchs.

But Wilbur J. Cohen, acting secretary of Health, Education and Welfare, who favored the plan 20 years ago, said he now believes the government should move on other fronts. He said it would be difficult—"A monumental task"—at this time to achieve a workable and acceptable program of compulsory national health insurance. He did not foresee the United States following the pattern of European nations in adopting a monolithic central health system for the entire nation. He said this country is too large for a single plan, but that the benefits under any of various plans adopted should be relatively uniform for all Americans.

(Continued on page 576)



Help the Needy!



A patient of advancing years may appear to "have everything," but may well be in need—*medically*. You know the symptoms. She's tired most of the time. Though there's nothing wrong with her organically, she suffers from general malaise. Lassitude has become her way of life . . . vague aches and pains her major concern.

Such a patient has entered the "Mediatric Age"—that stage of her life in which she's an ideal candidate for MEDIATRIC. This preparation provides the anabolic benefits of gonadal steroids, plus a gentle mood uplift and the nutritional support she's apt to need. MEDIATRIC is intended to help keep her more alert and active, and relieve general malaise . . . to help restore that sense of physical and emotional well-being that the elderly *deserve* to enjoy.

The estrogen component in MEDIATRIC is PREMARIN® (conjugated estrogens-equine), the orally active, natural estrogen so widely prescribed for its physiologic and metabolic benefits. The combination of estrogen and *methyltestosterone* can help maintain anabolic balance to forestall premature degenerative changes related to estrogen deficiency. MEDIATRIC also supplies a small amount of *methamphetamine HCl* to provide a gentle mood uplift, and nutritional supplements specially selected to meet the needs of the aging.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.
WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.
SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.
SUGGESTED DOSAGES: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.
In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.
SUPPLIED: No. 752—MEDIATRIC Tablets, in bottles of 100 and 1,000.
No. 252—MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.
No. 910—MEDIATRIC Liquid, in bottles of 16 fluidounces.

	Each MEDIATRIC Tablet or Capsule contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC Liquid contains:
Conjugated estrogens-equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
Pyridoxine HCl	3.0 mg.	—
Calcium pantothenate	20.0 mg.	—
Ferrous sulfate exsiccated	30.0 mg.	—
Ascorbic acid	100.0 mg.	—
		(Contains 15% alcohol†) †Some Loss Unavoidable

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Steroid-nutritional compound

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Butazolidin® alka
in rheumatoid arthritis.

If it doesn't work in a week,
forget it.



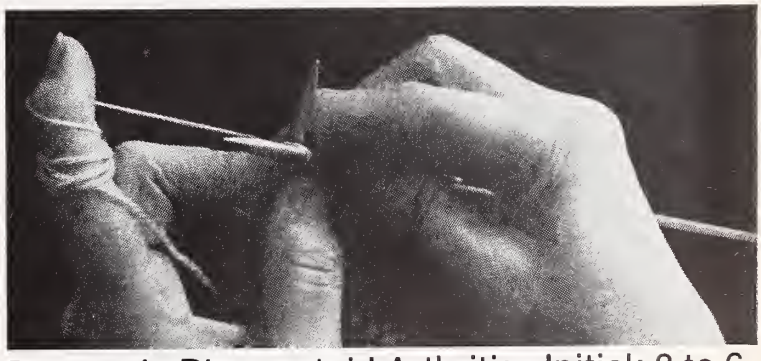
ut don't forget this about Butazolidin alka

ontraindications: Edema; danger of cardiac ecompensation; history or symptoms of peptic lcer; renal, hepatic or cardiac damage; istory of drug allergy; history of blood dysrasia. The drug should not be given when the atient is senile or when other potent drugs are iven concurrently. Large doses of Butazolidin lka are contraindicated in glaucoma.

Varning: If coumarin-type anticoagulants are iven simultaneously, watch for excessive ncrease in prothrombin time. Instances of evere bleeding have occurred. Persistent or evere dyspepsia may indicate peptic ulcer; erform upper gastrointestinal x-ray diagnostic ests if drug is continued. Pyrazole compounds ay potentiate the pharmacologic action of ulfonylurea, sulfonamide-type agents and nsulin. Carefully observe patients receiving uch therapy. Use with caution in the first trimester of pregnancy and in patients with hyroid disease.

Precautions: Before prescribing, carefully elect patients, avoiding those responsive to outine measures as well as contraindicated atients. Obtain a detailed history and a complete physical and laboratory examination, ncluding a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately f fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.



Dosage in Rheumatoid Arthritis: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response. (B)46-070-A

Butazolidin® alka Geigy

Capsules
phenylbutazone, 100 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg.

For complete details, please see full Prescribing Information.

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Ardsley, New York 10502

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SAN FRANCISCO AMA '68

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Continue your postgraduate education with a varied program of • four General Scientific Meetings on Auto Accidents, Health Care Planning, Infectious Diseases, Treatment of Advanced Malignant Disease • 23 Section Programs • Color Television • Medical Motion Pictures • and over 600 scientific and industrial exhibits. All are designed to bring you up-to-date on what is making medical news today. You will attend lectures by the nation's outstanding medical authorities and discuss with them the significant advances in medicine.

In addition the AMA TV network will present more than 40 hours of convention news.

Reserve now for the Scientific Awards Dinner in honor of the Scientific Award Winners—Wednesday, June 19, 1968. Since space is limited, we suggest you make your reservations before June 3, 1968. Tickets are $10.00 each, payable in advance.

The complete scientific program, plus forms for advance registration and hotel accommodations, will be featured in JAMA, May 6, 1968.

SAN FRANCISCO, CALIFORNIA · JUNE 16-20, 1968

AMERICAN MEDICAL ASSOCIATION'S 117th ANNUAL CONVENTION · BROOKS HALL

ENDURON® | ENDURONYL®

METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

EUTRON™

Each tablet contains
Pargyline Hydrochloride 25 mg.
with Methyclothiazide 5 mg.

Indications—Moderate to severe hypertension.

Contraindications—Pheochromocytoma, paranoid schizophrenia, hyperthyroidism and advanced renal failure. Not recommended in malignant hypertension, children under 12, pregnant patients.

Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

ABBOTT

TM-TRADEMARK

Month in Washington

(Continued from page 569)

Cohen said first priority now should be given maternal and child health programs. He listed as other "must" programs the expansion of medical manpower and health facilities and continued investment in health research.

Sen. Abraham Ribicoff (D., Conn), chairman of the subcommittee holding hearings on health care costs, also said that the emphasis now should be on more immediate solutions. He said that his experience with the fight over Medicare had convinced him that it would be a long time before Congress would accept compulsory national health insurance.

He said that the first week of the hearings "made clear that a health-care system in America must include everyone—public and private organizations, insurance companies, the Blues, the voluntary hospitals, nursing homes, medical societies, individual private practitioners, those who practice medicine in groups, and state, local and federal agencies."

* * *

Manufacturers of oral contraceptives are being asked by the Food and Drug Administration to revise uniform labeling for the products to reflect findings from research in Great Britain that there is an association between the use of oral contraceptives and thromboembolic diseases.

Dr. Herbert L. Ley, Jr., director of the FDA's Bureau of Medicine, notified the manufacturers of such reports in the April 27 issue of the BRITISH MEDICAL JOURNAL. He called the companies to a Washington meeting for discussion of "prompt revision of uniform labeling."

Proposed labeling changes, based on preliminary results and unofficial reports of the British findings, had been submitted to U. S. manufacturers by the FDA last month. The proposed new FDA labeling would reflect the findings of the British studies and would be aimed at prescribing physicians, an FDA spokesman said.

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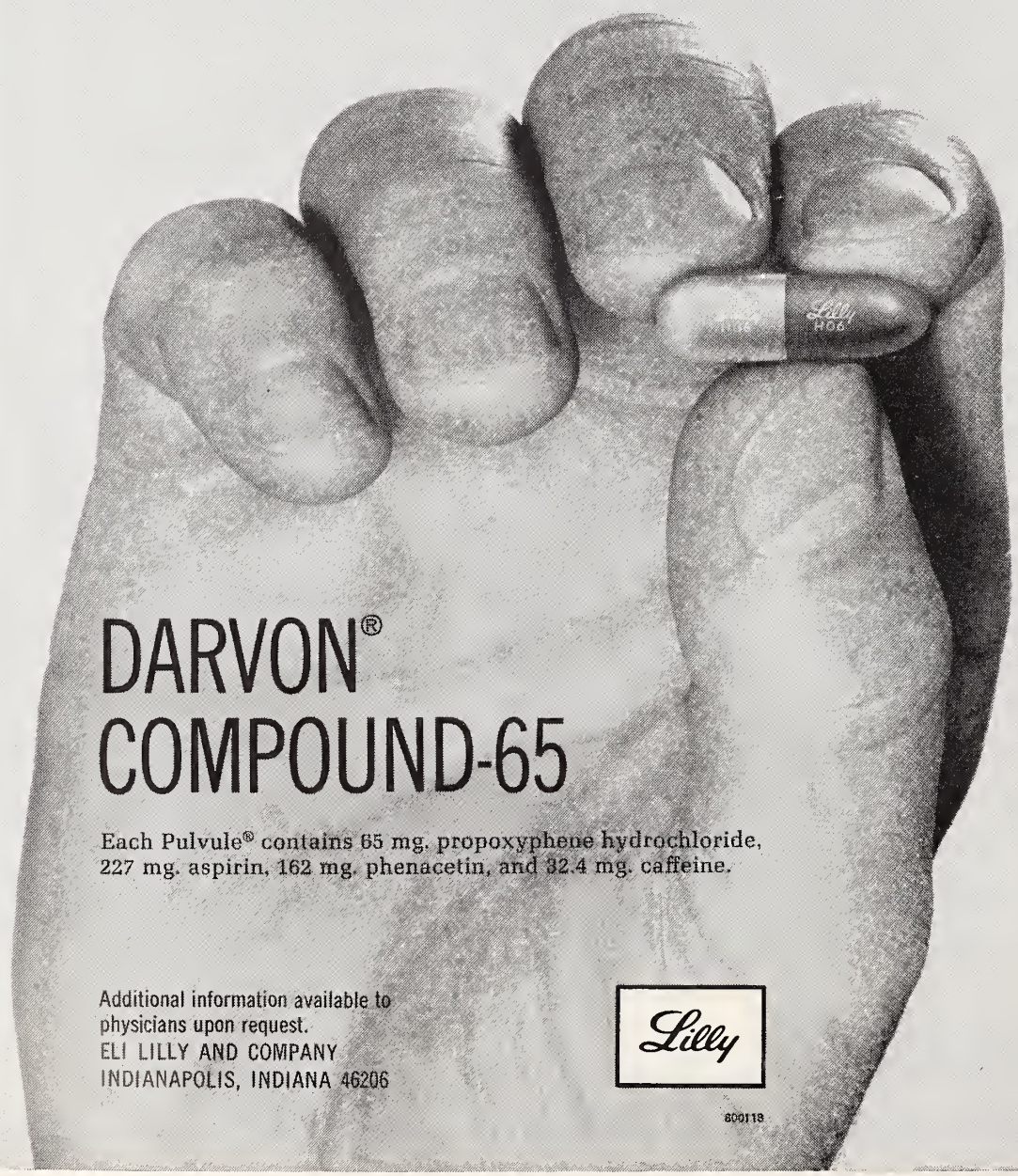
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Scientific Articles

Hyperinsulinism: A Report of 12 Cases at the University of Iowa Hospitals

R. T. SOPER, M.D., T. H. KOCH, J. A. GIUS, M.D., and R. D. LIECHTY, M.D.
Iowa City

HYPERINSULINISM AND HYPOGLYCEMIC ATTACKS constitute a diagnostic challenge. Hyperinsulinism is a rare disease, and it is often obscured by intermittent symptoms that mimic a primary neurologic or psychologic disorder.

Twelve hyperinsulinism patients treated in University Hospitals form the basis for this report. Although recent laboratory aids show promise of helping in the diagnosis and treatment of hyperinsulinism, the physician plays the key role. He must screen many patients to select a few candidates for laboratory investigation.

MATERIALS (SEE TABLE 1)

Age. The 12 patients in this study had an average age of 27 years, and an age range extending from 6 months to 77 years, but half of them were two years of age or younger.

Sex. Of the 12 patients, three were males and nine females.

Weight. Obesity occurred in four of the six adult patients. In all six children the weight percentiles exceeded the height percentiles for their respective ages, and the weights of three exceeded the 50th percentiles for their respective ages.

Laboratory Findings. See Table 1.

ANATOMIC LOCATION AND PATHOLOGY (SEE FIGURE 1)

All six adults had one or more functioning islet-cell adenomas. However only one of the children had an adenoma, and the other five had islet-cell hyperplasia. Those latter five children were classified as having *idiopathic hypoglycemia,* which is responsible for at least two-thirds of the cases of hypoglycemia in the young.[17]

SYMPTOMS

Central-nervous-system complaints dominated the clinical picture in all 12 hyperinsulinism patients. All six children had convulsions from hypoglycemia, and the convulsions prompted the workup and the correct diagnosis. Two adults also had clonic convulsive episodes, and the rest had losses of consciousness or severe behavioral abnormalities such as stupor, tremor, clumsiness, confusion and irrational behavior.

The durations of the sypmtoms prior to oper-

Mr. Koch is a staff member, Dr. Gius is a professor, Dr. Soper is an associate professor, and Dr. Liechty is an associate professor in the Department of Surgery at the U. of I. College of Medicine.

TABLE I

HYPERINSULINISM PATIENTS

Patient	Age	Sex	Weight	Major Symptoms	Laboratory Findings	Treatment	Pathology	Results	Complications
1.	56	F	Obese	Loss of consciousness	Fasting blood sugar 20-40 mg. per cent; satisfied Whipple's triad; positive intravenous tolbutamide	Partial pancreatectomy with splenectomy	Adenoma of tail of pancreas	Well (12-30-59)	Pancreatic fistula
2.	2	M	Ht. 1st percentile Wt. 10th percentile	Withdrawal with retardation, sudden periods of sleep lasting more than 15 minutes; convulsions	Fasting blood sugar 20-30 mg. per cent; abnormal casein test; flat glucose-tolerance test	Preoperative glucocorticoids with sugar water in emergencies; partial pancreatectomy with splenectomy	Possible hyperplasia	Well except for speech disorder (12-12-67)	None
3.	1	F	Wt. 90th percentile	Convulsions followed by unconsciousness; retarded	Fasting blood sugar 15-25 mg. per cent; elevated blood-insulin	Preoperative glucocorticoids with high protein-low carbohydrate diet; partial pancreatectomy; postoperative glucocorticoids reduced, then withdrawn	Hyperplasia	Well (8-6-60)	None
4.	77	F	Normal for age	Spells with glassy stare, beating of legs and neck with her hands; facial grimaces and gutteral noises	Fasting blood sugar 5-50 mg. per cent; satisfied Whipple's triad	Excision of two adenomata	Two adenomata in tail of pancreas	Well (7-16-59)	Diabetic glucose tolerance test
5.	2	F	Ht. 2nd percentile Wt. 14th percentile	Clonic convulsions and loss of consciousness; retarded	Fasting blood sugar 25-30 mg. per cent; elevated insulin	Partial pancreatectomy x 2; Alloxan water in emergencies	Probable hyperplasia	Partial symptomatic relief; non-fasting bl65-100 mg. (3-17-64)	None
6.	57	M	Normal prior to surgery; obese following surgery and diet change	Mental confusion and tremors	Fasting blood sugar 10-15 mg. per cent; satisfied Whipple's triad	Partial pancreatectomy x 2; alloxan therapy x 2	Adenoma in head of pancreas, and in duodenal loop (at autopsy)	Died (7-17-54)	Died following alloxan therapy

7.	29	F	Obese	Spells with hollering or screaming as if drunk; also bizarre acts such as crawling under the TV set	Fasting blood sugar 25-55 mg. per cent; flat glucose-tolerance test; satisfield Whipple's triad	Excision of three adenomata	3 adenomata, 2 in body and 1 in tail of pancreas	Well (7-13-65)	None
8.	15 Mos.	F	Ht. 13th percentile Wt. 24th percentile	Mild clonic convulsions; unconsciousness on occasion	Fasting blood sugar 25-45 mg. per cent; positive leucine sensitivity; elevated blood insulin; normal glucose-tolerance test	Subtotal pancreatectomy without splenectomy	Hyperplasia	Well, except for residual seizure disorder (10-11-67)	None
9.	6 Mos.	F	Ht. 80th percentile Wt. 86th percentile	Clonic convulsions; loss of consciousness; retardation	Fasting blood sugar 0-44 mg. per cent; positive leucine sensitivity; normal glucose-tolerance test; elevated blood insulin	Subtotal pancreatectomy without splenectomy, preoperative frequent feedings; prednisone, glucagon	Adenoma in tail of pancreas	Cured of hyperinsulinism; died in postoperative period (2-8-67)	Died from postoperation bowel infarction
10.	59	F	Obese	Losses of consciocsness, 2-8 hrs. duration; occasional clonic convulsions	Fasting blood sugar 0-20 mg. per cent; satisfied Whipple's triad	Subtotal pancreatectomy with splenectomy	Adenoma at junction of body and tail of pancreas	Well (1-30-67)	None
11.	17	F	Obese	Mild clonic convulsions; loss of consciousness; activity such as opening and closing a drawer for several minutes	Fasting blood sugar 5-30 mg. per cent; satisfied Whipple's triad; diabetic glucose-tolerance test	Excision of adenoma with splenectomy	Adenoma in body of pancreas	Well (4-27-67)	Pseudocyst drained surgically; subphrenic pancreatic fluid drained surgically; bowel infarction with resection of bowel
12.	5 mos.	M	Wt. 62nd percentile	Clonic convulsions; "trance-like" state; moderate retardation	Fasting blood sugar 14-30 mg. per cent; flat glucose tolerance test; rise in blood sugar with glucagon; high blood-insulin; no rise in blood sugar with prednisone	80 per cent pancreatectomy without splenectomy	Islet cell hyperplasia	Normal blood sugar with Diazoxide 20 mg. q6h	None

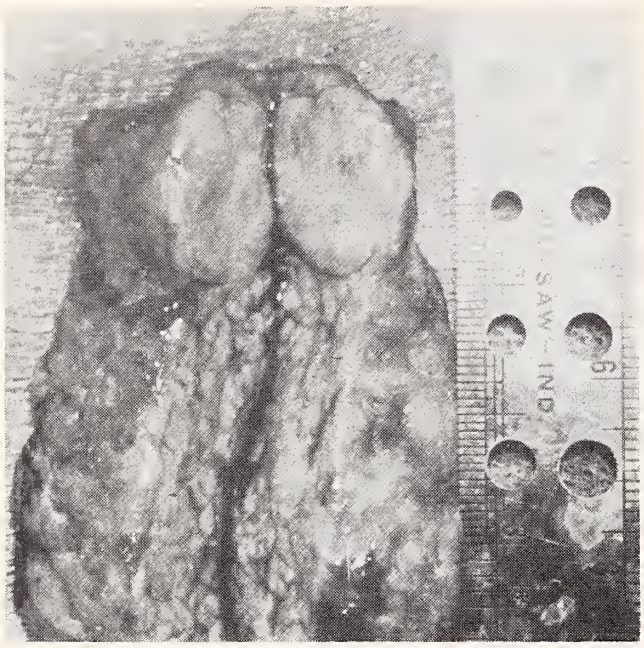


Figure 1. Benign islet-cell adenoma arising at junction of body and tail of pancreas. Patient #10, a 59-year-old woman.

ation ranged from six months to seven years, and the average was 23 months.

DIAGNOSIS

The diagnosis of hyperinsulinism usually begins with finding hypoglycemia during an attack. In the absence of initial hypoglycemia, prolonged fasting will induce the clinical picture of hyperinsulinism and confirmatory hypoglycemia. Blood insulin levels, the intravenous tolbutamide test[5] and, in children, the leucine-tolerance tests[3] are useful as confirmatory measures. The insulin levels may be normal except when the patient is hypoglycemic, either spontaneously or following a challenge with tolbutamide or leucine. In the adult the tolbutamide test gives a distinctive and diagnostic blood-glucose curve for a functioning adenoma, but that result is not always reliable in children[3, 18] because of the prolonged hypoglycemia that it provokes in cases of either idiopathic or leucine-sensitive hypoglycemia. A leucine-tolerance test may be helpful in children when the tolbutamide test is normal,[3, 6,18] but it is not, in itself, a specific test.

TREATMENT

All 12 patients had surgical exploration of the pancreas. The operations included local excision of pancreatic tissue in three patients, and subtotal pancreatectomy in nine patients (Figure 2). Conservative treatment, used in the postoperative period in three of the 12 patients after the operative procedure proved inadequate, included glucagon, sugar water (in emergencies), Diazoxide and high protein-low carbohydrate diets. In the immediate postoperative period one patient was treated with glucocorticoids. One patient previously reported[7] was given Alloxan intravenously, and died from complications of drug therapy. One infant (patient #12) with islet-cell hyperplasia required Diazoxide to maintain normal blood sugars after 80 per cent distal pancreatectomy. She is now being weaned from it.

RESULTS

Seven of the 12 patients in this study recovered completely. A patient who had fasting blood sugars of 45-50 mg. per cent while being given glucocorticoids ultimately recovered. That patient was weaned from glucocorticoids and has been asymptomatic since. Another patient remained symptomatic, but the attacks were reduced in number and severity. The symptoms responded to sugar water. Later the patient was lost to follow-up. One patient is now being weaned from Diazoxide.

There were two deaths in this series. One patient died in the immediate postoperative period from infarction of the intestine. That patient had a postoperative blood sugar of 275 mg. per cent, which suggested correction of the hyperinsulinism. The other death occurred from Alloxan therapy, as mentioned above.[7] Two operations, in which about 90 per cent of the pancreas was resected, had failed to reverse the hyperinsulinism. At autopsy, a small adenoma was found hidden in the residual pancreatic tissue behind the common bile duct.

DISCUSSION

Hyperinsulinism may be difficult to diagnose. The symptoms, identical with those encountered in diabetes mellitus when excess insulin has been administered, are also similar to those seen in patients with certain neurologic disorders. Aberrations in the state of consciousness were the commonest symptoms in our patients (11 of the 12 patients, or 92 per cent). Of those 11, seven (58 per cent) had convulsions; some of them had been treated for epi-

lepsy. *The physician should suspect hyperinsulinism in all patients with unexplained, intermittent neurologic symptoms, especially when attacks increase in frequency and tend to occur during a period of fasting.*

A fasting blood sugar of less than 50 mg. per cent is the most important laboratory clue. Whipple's triad of hyperinsulinism[16] includes: (1) onset of symptoms of hypoglycemia in the fasting state; (2) fasting blood-sugar level of less than 50 mg. per cent; and (3) immediate relief of symptoms with the administration of glucose. Patients sometimes must fast as long as 72 hours in order to precipitate the hypoglycemic state. With all three of Whipple's triad satisfied, the physician can be certain of the diagnosis of hyperinsulinism.

An intravenous-tolbutamide test is an excellent additional aid in making the diagnosis of functioning beta-cell pancreatic adenoma in adults.[3, 18] In children, however, the test is not specific for adenoma. There is a serious risk of hypoglycemic convulsions complicating the intravenous-tolbutamide test. One should therefore be well versed in the hazards and the necessary precautions before using it. Some children with idiopathic hypoglycemia respond to the administration of leucine by exhibiting severe hypoglycemia. They sometimes respond thereafter to a low-leucine diet.[3]

Blood-insulin assays during attacks or in concert with leucine and tolbutamide tests yield confirmatory evidence of hyperinsulinism.[15] Normal blood-insulin levels obtained during suspected hypoglycemic attacks or during tolbutamide or leucine-tolerance tests usually rule out the possibility of hyperinsulinism. But normal blood-insulin levels during asymptomatic periods do not rule out the diagnosis.

Although hunger is uncommon during hypoglycemic attacks, patients often associate attacks with failure to eat regularly. Sometimes patients eat excessively after learning that eating prevents attacks. Obesity may result, as it did in several of our patients.

Hyperinsulinism occurs in patients of all ages. In infants, diffuse hyperplasia of islet tissue is far commoner than functioning tu-

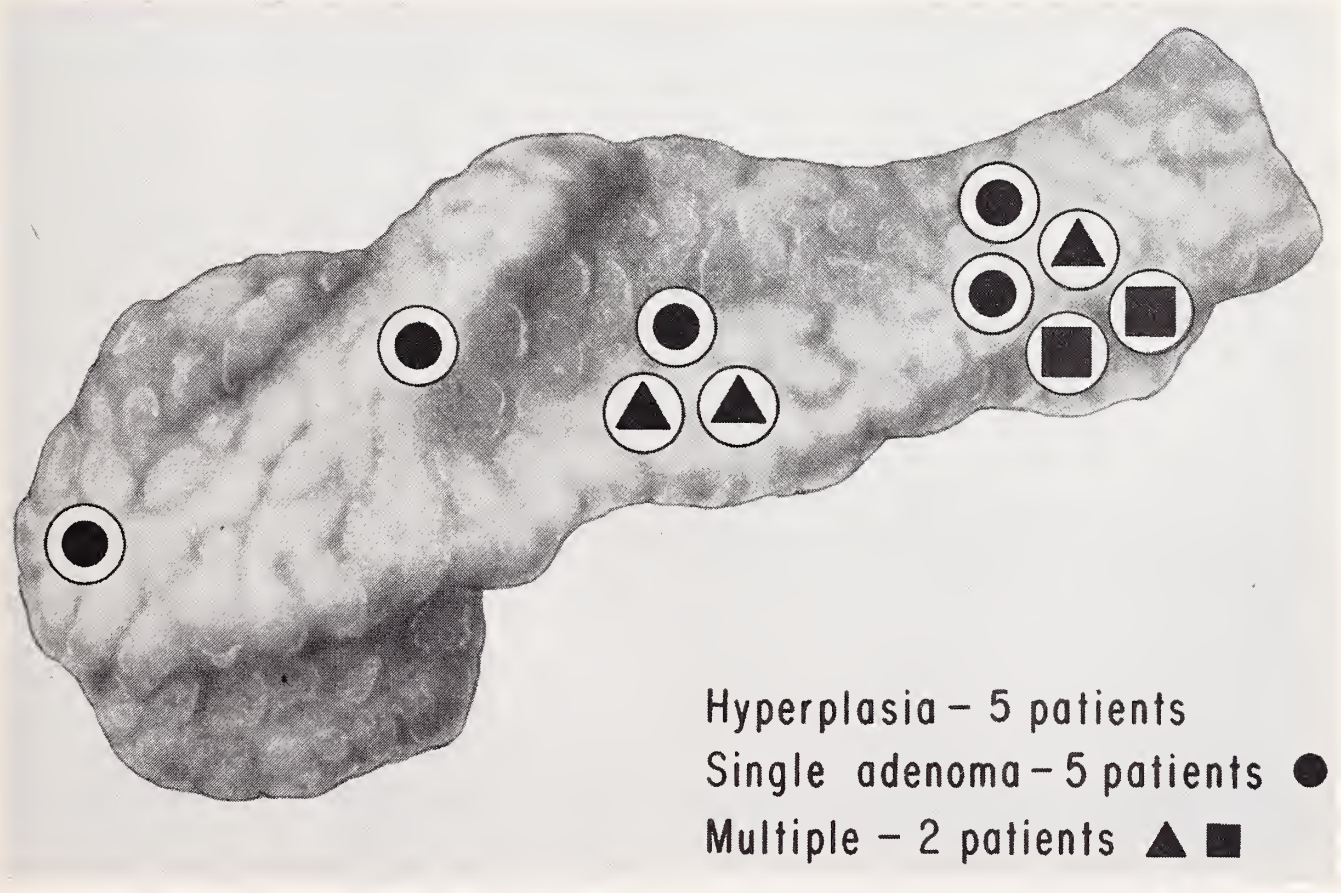


Figure 2. This shows the locations of insulin-secreting adenomas. Five patients had diffuse hyperplasia.

mors, but adenomas do occur, and thus the pancreas must be thoroughly examined during operations for this condition. For example, one six-month-old child in this group had a resectable adenoma. Also, although hyperinsulinism rarely occurs in the aged, a 77-year-old woman in this study reminds us that functioning islet-cell adenomas do not necessarily respect advanced age. The symptoms of senile neurologic atrophy may sometimes obscure an underlying insulin-producing tumor.

The glucose-tolerance test seldom proves helpful in the diagnosis of hyperinsulinism. This test, although generally normal, may be flat or even diabetic in type. Paradoxically, prediabetes can cause hypoglycemia. The glucose-tolerance test will help pinpoint these patients. They should have an early diabetic elevation of blood sugar, followed by late hypoglycemia. Serum electrolytes, liver-function measurements, tests of urine for reducing substance, a glucagon-stimulating test, studies of adrenal-medullary function and other sophisticated measurements are needed in the workups of hypoglycemic children.

Since repeated hypoglycemic attacks lead to progressive and irrevocable cerebral damage and death, the physician should attempt to diagnose and treat hyperinsulinism as early as possible. Conservative treatment (steroids, glucagon, Diazoxide) seldom eliminates hypoglycemic attacks, but does help to reduce their frequency. Each of these drugs, however, has significant side effects of its own.

During the surgical exploration, painstaking mobilization of the pancreas and duodenum is mandatory for complete inspection and palpation of the pancreas in the search for an adenoma. A good example of how a small tumor can be missed on two explorations, but found later at autopsy, was illustrated in the case of patient #5. Adenomas rarely arise from aberrant pancreatic tissue, as in a Meckel's diverticulum, but such sites must be inspected during an exploration, if the pancreas is normal.

During the surgical procedure, and while intravenous dextrose is being administered, serial blood-sugar estimations guide surgical treatment effectively.[12] Following removal of an islet-cell adenoma, the blood-glucose level generally rises to more than 200 mg. per cent. If that does not occur, one should continue the search for a tumor. Monitoring the blood-sugar level might have helped us to resolve the problem encountered in patient #5. Also, if there are multiple adenomas or if an adenoma is hidden in an aberrant site, the surgeon is more likely to continue searching for them if the serial blood sugars remain low following a partial pancreatectomy.

Results from complete removal of insulin-secreting adenomas are excellent, and a full recovery can be expected. In diffuse islet-cell hyperplasia the results vary, in part because no precise guidelines exist for the surgeon in deciding how much pancreatic tissue to resect. Koop *et al.*[9] have recommended removal of 75-80 per cent of the distal pancreas. Reviewing nearly 60 patients with idiopathic hypoglycemia treated by means of that operation, they found that 90 per cent had achieved acceptable control of their blood sugars, although 16 per cent did require subsequent medical treatment or a second operation as well. To our knowledge, the use of serial blood-sugar values during an operation under these conditions has not been reported. This may be a helpful approach to the management of these patients in the future.

Regrettably, five children in our group had significant mental retardation before they were referred for surgical treatment. None of the survivors has markedly improved in this regard, despite normal glucose metabolism postoperatively.

SUMMARY

1. Twelve patients with hyperinsulinism have been treated surgically at University Hospitals, Iowa City.

2. The cause of hyperinsulinism was a single functioning islet-cell adenoma of the pancreas in five patients; multiple adenomas in two patients; and diffuse islet-cell hyperplasia in five patients. All five of the patients with hyperplasia were children.

3. The most important laboratory test was the fasting blood sugar. All of the 12 patients had values below 50 mg. per cent.

4. Neurologic symptoms predominated in the presenting complaints.

5. All 12 patients had resection of pancreatic tissue or pancreatic tumors. *That resection*

should be done before irreversible brain damage has resulted from the hypoglycemia.

6. Eight patients had total recovery; two had partial recovery; and two patients died. One of the patients died in the postoperative period from small-bowel infarction, and one died a year after operation from complications of Alloxan therapy for continued hyperinsulinism.

7. Surgical removal of hyper functioning islet-cell tissue is the most satisfactory treatment for hyperinsulinism. Drugs and diet have proved inadequate.

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The Contraceptive Polyp: A Diagnostic Dilemma

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NEARLY SEVEN MILLION AMERICAN WOMEN practice birth control with oral contraceptives. As a result of the artificial hormonal condition which is thus maintained, ovulation does not occur. However recent publications suggest an association between the use of synthetic sex hormones and the appearance of atypical morphologic alterations in the breast and uterus.[1-7] These abnormalities concern clinicians as well as pathologists because they are most frequent in young women and because differentiating them, microscopically, from carcinomas presents difficulties. Family physicians are consulted by these women in order to obtain oral contraceptives, and we want to direct the attention of those practitioners to a clinically-visible cervical change with an unusual histologic picture recently associated with "the pill."

The authors are assistant professors, respectively, in the Department of Obstetrics and Gynecology and the Department of Pathology at the U. of I. College of Medicine.

CASE REPORTS

Case No. 1. P.S. initially came to the endocrine clinic at University Hospitals for evaluation of menstrual irregularity and hypertri-

chosis. Elevated 17-ketosteroids, partially suppressed by Dexamethasone, suggested adrenal hyperplasia. Dexamethasone 0.25 mg. q8 hrs. each day was started in August, 1966, and continued until June, 1967.

During that period there was no control of hair growth and there were irregular but ovulatory cycles. Norethynodrel 2.5 mg. with Mestranol 0.1 mg. tablets* were started in October, 1966, to regulate menstrual cycles and suppress ovarian androgens. The dual medications totally suppressed the 17-ketosteroids. Norethynodrel with Mestranol was continued after Dexamethasone was stopped. Fourteen months later, the uterine cervix appeared clinically abnormal. The endocervical os was everted, reddened and friable, and a 3-4 mm. polyp was noted. A Papanicolaou smear was obtained and the polyp was removed. The smear was reported as negative.

Case No. 2. J.F., a 26-year-old white female, was placed on cyclic Norethynodrel 2.5 mg. with Mestranol 0.1 mg. tablets in September, 1964. An examination in March, 1967, revealed no pelvic abnormalities. Pelvic examination was repeated in October, 1967, because of a six-week history of postcoital spotting. A 2 x 1.5 cm. polypoid, friable, red mass covering most of the cervical portio was visualized. Portions of that mass broke off during the examination and were submitted for pathologic evaluation. The oral contraceptive was discontinued, and the lesion disappeared clinically by January, 1968.

* Marketed by G. D. Searle & Co., Chicago, under the brand name Enovid-E.



Figure 1. Case No. 1. The atypical epithelial cells are arranged in nests, cords and acini. Inflammatory cells permeate the stroma diffusely. Hematoxylin and eosin X 125.

MICROSCOPIC CHARACTERISTICS

The two specimens were identical except for minor architectural dissimilarities. Each exhibited a polypoid shape and was almost entirely covered by a single layer of epithelium ranging from flattened cuboidal to tall and occasionally vacuolated columnar cells. The internal configurations differed slightly, depending upon variations in stromal and epithelial components. The fibrous stroma deep within the polyps appeared sparsely cellular and edematous, in contrast to the compressed, more-cellular peripheral fibrous tissue. The inter-

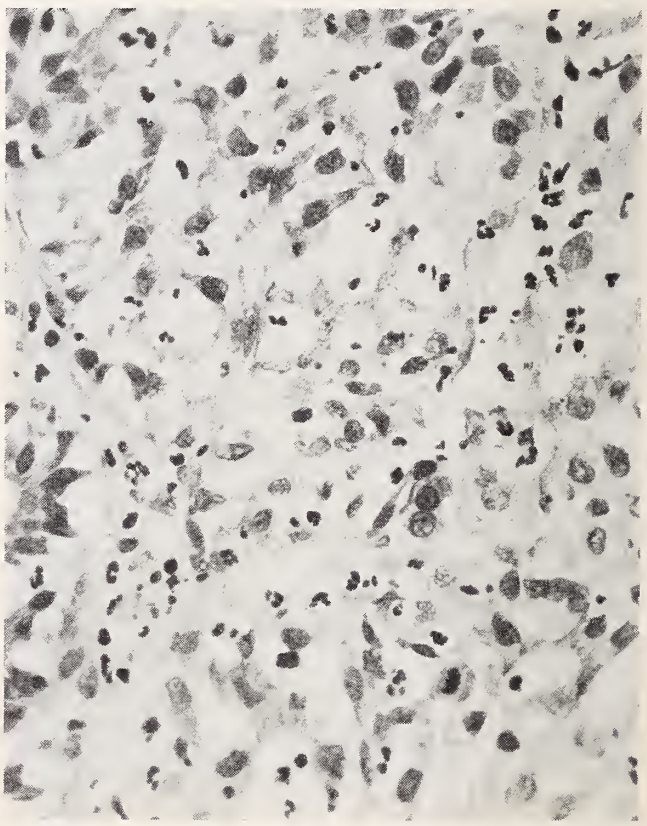


Figure 2. Case No. 1. The slightly pleomorphic nuclei exhibit a finely divided chromatin network. Several nuclei contain prominent nucleoli. One cell demonstrates mitosis. Inflammatory cells appear throughout the polyp. Hematoxylin and eosin X 500.

mixed, relatively uniform epithelial cells displayed granular eosinophilic cytoplasm, and had slightly pleomorphic, hyperchromatic nuclei with a regular fine-chromatin pattern. A few nuclei contained prominent nucleoli, and others demonstrated rare mitotic figures. Most of these cells combined to form acini composed of a single cell layer. Rare acini exhibited pseudostratification, with some loss of nuclear polarity. Other epithelial cells merged into nests and cords that seemed to infiltrate the stroma. Some acini contained periodic-acid-Schiff (PAS) positive material which was thought to be mucin and which extravasated focally into the stroma. Random capillaries penetrated the stroma, and chronic inflammatory cells—predominantly lymphocytes and plasma cells—diffusely permeated the entire polyp.

DISCUSSION

There are some presently unanswerable questions concerning the long-range influence of orally administered artificial sex hormones upon body metabolism, but they are effective contraceptive agents. Coincident disorders observed in patients using those drugs may or may not be causally related to them, but the hormones cannot be considered harmless until all of their pharmacologic and physiologic effects have been clearly defined.

Maqueo *et al.*, in a well-controlled study, microscopically examined cervical tissue from 104 women who had taken oral contraceptives for periods ranging from nine months to three years, and noted a sequential series of morphologic alterations related to duration and intensity of therapy.[8] The changes consisted of hyperplasia and hypersecretion of endocervical "glands," stromal edema and hypervascularization with vascular engorgement. The changes were further accentuated in women on continuous high-dosage progestin therapy, and during pregnancy. Taylor *et al.* initially described a distinctive type of atypical endocervical hyperplasia in biopsy material, and first suggested a relationship between that histologic entity and the use of oral contraceptives.[1] Shortly thereafter, Candy and Abell reported similar changes in endocervical glands and reserve cells.[2] None of Maqueo's patients demonstrated those atypi-

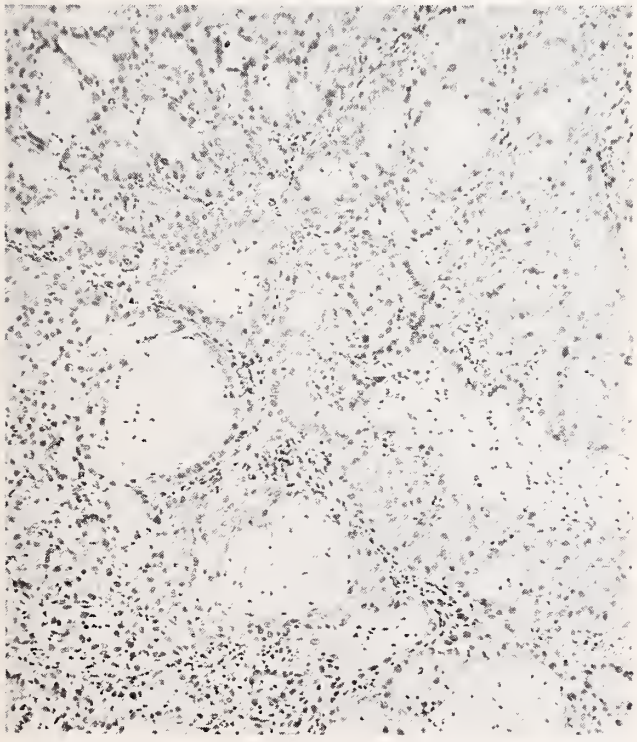


Figure 3. Case No. 2. The surface epithelial cells range from flattened cuboidal to tall, vacuolated columnar cells. The fibrous stroma appears condensed peripherally and edematous in central areas. Mucin-containing acini vary in size. Hematoxylin and eosin X 125.

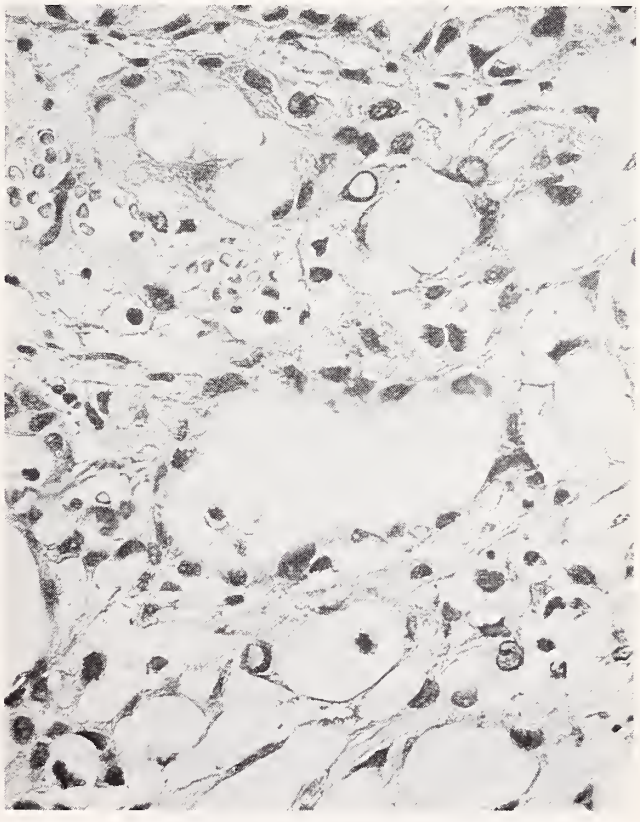


Figure 4. Case No. 2. The pleomorphic nuclei focally manifest loss of polarity. The stroma exhibits extravasated mucin. Capillaries course randomly within the polyp.

cal changes, but both cases presented above showed them.

Misinterpretation of the characteristic histologic pattern of this lesion can lead to an erroneous diagnosis of cervical adenocarcinoma. Cases of cervical adenocarcinoma reviewed at the Armed Forces Institute of Pathology failed to demonstrate any histologic pattern similar to this one that has been associated with the use of oral contraceptives.[1] The pathologist must differentiate between benign atypical endocervical hyperplasia and cervical adenocarcinoma, proceeding in accord with the criteria that we have listed in Table 1.

Clinically, these cervical abnormalities usually occur in young women who have been taking the combination type of contraceptive pill. The cervix may appear everted, and hypertrophied endocervical tissue, or a polyp several millimeters to one or two centimeters in diameter, can occasionally be observed.

Evaluation should include a cytologic examination and a biopsy from any visible cervical abnormality. In order to facilitate a correct histologic interpretation, the pathologist must be alerted to the fact that the patient has been using oral contraceptives.

Recently Graham *et al.* suggested the clinical and histologic reversibility of these atypical changes.[3] The potential for autonomous proliferation in response to continued stimulation remains undetermined, but presently it is desirable to discontinue oral contraceptives in patients who demonstrate this cervical abnormality.

SUMMARY

A benign, yet atypical cervical lesion may occur in young women who use oral contraceptive drugs. When such a morphologic change is noted, withdrawal of the medication should constitute initial therapy. Judicious examination will differentiate the atypical hyperplastic polyp from cervical adenocarcinoma, and will obviate overzealous therapy. Subsequently, these women may practice other methods of birth control.

ACKNOWLEDGEMENT

The authors wish to thank Richard Karraker, M.D., and N. T. Braatelien, M.D., of Moline, Illinois, for contributing the clinical history and histologic sections for Case No. 2.

TABLE I

CONTRASTING HISTOLOGIC CHARACTERISTICS

Contraceptive Lesions	Cervical Adenocarcinomas
1. Usually covered by intact epithelium	1. Covering epithelium may or may not exist
2. Loosely arranged acini with normal or edematous intervening stroma	2. Back to back acini with no intervening stroma
3. Acinar epithelium usually one cell layer thick	3. Acinar epithelium is usually pseudostratified
4. Rarely a loss of nuclear polarity	4. Frequent loss of nuclear polarity
5. Rare prominent nucleoli	5. Many prominent nucleoli
6. Rare mitoses	6. Frequent mitoses; abnormal mitotic figures
7. Finely divided nuclear chromatin	7. Clumped nuclear chromatin
8. Diffusely scattered inflammatory cells within the lesion, especially eosinophils and plasma cells	8. Rare inflammatory cells within the tumor

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Recommendations to Iowa Physicians on

The Prevention of Tuberculosis

Tuberculin Tests and Chemoprophylaxis Endorsed by the Iowa Thoracic Society, the Iowa Tuberculosis and Respiratory Disease Association, the State Board of Health and the Iowa Medical Society

April, 1968

CHEMOPROPHYLAXIS*

ANTIMICROBIAL DRUGS, which have revolutionized the therapy of tuberculosis, can also be used effectively in chemoprophylaxis—the prevention of disease in the infected individual. Chemoprophylaxis acts by diminishing the bacterial population in the "healed" or invisible lesions of the person taking the drug. In reality, it constitutes treatment of the infection and prevents the clinical disease from developing.

A substantial and growing body of scientific data testifies to the value of antituberculosis drugs in preventing clinical tuberculosis. The extensive trials conducted by the United States Public Health Service show a consistent reduction of morbidity in treated groups, and it seems reasonable to expect that chemoprophylaxis can reduce future morbidity from tuberculosis in these high-risk groups by some 50 to 75 per cent. It is likely that the extensive use of chemoprophylaxis now would reduce by 300,000 the total number of cases in the United States in the next 15 years.

Chemoprophylaxis can be insituted on a widespread basis through two major means:

1. **The family physician, pediatrician or internist** can institute chemoprophylaxis on an individual basis in individual patients who have a high risk of developing active tuberculosis.

2. **Community agencies** can work with the high-risk groups that can be approached through a public health program. In many instances these persons are already known to health departments, and their names are in the files of closed cases and in reports of screening programs.

Drugs Used in Chemoprophylaxis. A single drug, isoniazid, is used for chemoprophylaxis in a dosage of 300 mg. per day for adults and 10 mg. per kilogram of body weight per day (never more than 300 mg. per day) for children, administered in a single daily dose for a period of 12 months. Isoniazid is supplied as 50 mg. tablets or as a syrup containing 50 mg. per 5 cc.

The toxicity of the drug is low. It is clinically apparent in only 0.2 to 0.4 per cent of those taking the drug, and the toxicity is easily reversible. Follow-up studies of groups of people who have been treated with isoniazid for periods as long as 15 years have revealed no evidence of long-term deleterious effects from its use. Isoniazid is also inexpensive. There are very few side effects, and when they occur they are relatively minor—restlessness, insomnia, drowsiness, tremor or twitching, hyperreflexia or difficulty in micturition. Rarely, a peripheral neuritis occurs.

I. TUBERCULIN TESTS RECOMMENDED

A. The intradermal test, using a standard dose of 5 TU of PPD (**Intermediate P.P.D. Test** or .0001 mg. P.P.D. or .05 mg. old tuberculin) is the most accurate for both screening and diagnostic purposes. **Household contacts shall receive the standard intradermal test.**

B. Multiple puncture tests are screening tests only. Positive multiple puncture tests must be confirmed with a 5 TU intradermal test.

* American Thoracic Society: Chemoprophylaxis for prevention of tuberculosis. AM. REV. RES. DIS., **96**:558-560, (Sept.) 1967.

II. SIGNIFICANCE OF THE SIZE OF THE TUBERCULIN REACTION

A. Reactions 10 mm. or more in diameter of induration when the 5 TU intradermal test has been used are considered positive for purposes of chemoprophylaxis. Such reactions are more likely to indicate sensitivity induced by tubercle bacilli than by atypical mycobacteria.

B. Large reactions indicate a higher risk of the patient's developing clinical tuberculosis.

C. Reactions 20 mm. or more in diameter in patients of any age, but particularly in teenagers and young adults, should be considered for chemoprophylaxis. (See additional indications in Section III.)

III. INDICATIONS FOR CHEMOPROPHYLAXIS

A. **General Indications.**

1. **Any known cases treated without adequate drugs** should be restudied and chemotherapy should be considered. (Patients who have had clinical tuberculosis and have been "cured" without the use of drugs experience the highest rate of reactivation of all persons infected with M. tuberculosis organisms.)

2. **All children through age three who are tuberculin reactors** should be regarded as having active disease, even if their chest x-rays were normal.

B. **Indications for Chemoprophylaxis in Children** (For family physicians and pediatricians). The following are priorities for preventive treatment in children with tuberculin-positive reactions and without demonstrable pulmonary lesions:

1. **Age four years to puberty.** The need for chemoprophylaxis should be evaluated by the attending physician. He should consider factors such as the size of the tuberculin reaction, any recent known exposure, prolonged contact or massive exposure, and the patient's general condition of health, weight, intercurrent illnesses such as measles and whooping cough, his socioeconomic status, etc.

2. **Puberty.** This is a period of increased danger and high priority for chemoprophylaxis.

3. **Converters within one year, irrespective of age.** These should have chemoprophylaxis, particularly if they are known to have been exposed to an infectious case, or if their tuberculin reactions are large. Under some circumstances, if the exposure has been heavy, one should give chemoprophylaxis even though the reaction is negative.

Primary tuberculosis infection is particularly dangerous in infancy, and it is also dangerous in adolescence and young adulthood.

Tuberculin-positive children should be studied for extrapulmonary infections.

C. **Indications for Chemoprophylaxis in Adults** (For family physicians and internists). The following are priorities for preventive treatment in adults with reactions 10 mm. or more in diameter but with no demonstrable pulmonary lesions:

1. Conversion to positive within one year, particularly if the patient is known to have been exposed to an infectious case or if the tuberculin reaction is large.
2. Adverse socioeconomic conditions.
3. Silicosis.
4. Corticosteroid treatment.
5. Diabetes.
6. Post-gastrectomy.

Those with large reactions (20 mm. or more in diameter) have a high priority in consideration for chemoprophylaxis.

IV. DETECTION OF TUBERCULOSIS PATIENTS AND TUBERCULIN REACTORS AMONG CHILDREN, THEIR ASSOCIATES AND THOSE WHO WORK WITH CHILDREN

The Public Health Service recommends that children be tested in the school systems on their first entrance to school, and that they be retested at 14 years of age. In areas of high incidence, additional screening of certain population groups is indicated.

A. **First-Grade School Children.**

1. **Tuberculin testing of first-grade children.** (a) Tuberculin-test all children in this age group, and obtain chest x-rays of all reactors. (b) Treat according to previous instructions. (c) Encourage reexamination of **untreated reactors** each year for at least two years, and x-ray them annually beginning in the seventh grade.

If all first-graders in the community are examined as has been suggested, there is a good chance that a number of households will be discovered where a child has been exposed to an infectious case. The social contacts of

young children are rather limited, and the detection of intrafamilial sources of infection can be anticipated.

2. **Examination of Associates of Tuberculin-Positive First-Grade Children.** (a) Tuberculin-test **all members** of families and other persons with whom the child reactor has been associated; x-ray any of those who prove to be reactors; and perform other needed diagnostic services. (b) Treat tuberculin-positive children and adults according to previous instructions.

3. **Subsequent follow-up of untreated positive reactors who are associates of tuberculin-positive first-grade children.** (a) Encourage reexamination of children below puberty each year for at least two years, and x-ray them annually beginning in the seventh grade; (b) x-ray older child reactors periodically; (c) encourage annual x-rays for adults as long as they are associated with children.

Treat any of the foregoing in the presence of x-ray changes or conditions listed previously.

B. **Tuberculin Testing of 14-Year-Old Children (7th, 8th or 9th Graders)** in high-risk areas.

1. Tuberculin-test **all** children in selected grades, except known reactors.

2. X-ray all known and newly-discovered reactors annually.

3. Make a clinical and diagnostic examination of each student with a suspicious x-ray.

4. Treat according to previous instructions.

5. Take annual chest x-rays of all reactors through their child-rearing periods.

C. **Examination of the School Population Wherever Students Have Been Exposed to an Infectious Case of Tuberculosis Either Among School Children or Among School Personnel.**

1. Test an exposed school population if an infectious case of tuberculosis has occurred in the school-employee group or in the student body. Known reactors should be retested.

2. Schools with high-risk populations may be tested more intensively.

With the exception of special situations such as those referred to in point C, it is better to limit school tuberculin-testing programs (those suggested under points A and B) and place more stress on high-priority groups, including selected adults.

D. **Examination of School Employees.** The State Board of Public Instruction has adopted the following regulation (TEXT OF STANDARDS FOR APPROVAL OF SCHOOLS, Chapter 3 "Approved Schools and School Districts," Division IV: School Personnel):

3.4 (13) ANNUAL CHECK FOR TUBERCULOSIS. All persons employed in approved schools should be required to undergo an annual check for tuberculosis and file the results with the board.

Note: The "annual check" is interpreted to mean a tuberculin test for each nonreactor, and a chest x-ray for each known or newly-discovered reactor.

V. DETECTION OF TUBERCULOUS OR TUBERCULIN-REACTOR ADULTS

Priority in mass programs for the detection of tuberculosis cases and tuberculin reactors should be given to the older age groups. It is known that active disease is more frequent in the older populations, especially in the males. Sixty-five per cent of the tuberculin reactors in Iowa are 35 years of age or older. Seventy-five per cent of the new cases occur among persons 45 years of age or above. Three-fourths of the new cases develop in previously-infected persons.

The tuberculin test and the chest x-ray, used simultaneously and separately, will lead to the identification of persons who should receive treatment for active disease or chemoprophylaxis to prevent the disease.

The following population groups are thought most likely to yield high numbers of cases in tuberculosis-detection programs:

A. **Nursing-Home Patients and Employees.** These comprise the highest priority group, since many belong to the generation in which infection with tuberculosis is very common. The breakdown rate in this group is very high.

In view of the known high incidence of tuberculosis there, **nursing homes should be encouraged to x-ray all patients annually,** or to obtain sputum examinations if the patient can produce a satisfactory specimen. **It is recommended that nursing-home employees, if negative, undergo annual tuberculin tests.**

B. **Welfare Clients.** Tuberculin tests and x-rays of welfare clients are recommended.

Welfare recipients' living standards frequently are inferior, and consequently they break down with tuberculosis more often than other people. Up to five times as many active cases have been found among welfare recipients as in the general population.

C. **Residents of High-Incidence Neighborhoods.** Spot maps of reported tuberculosis cases frequently show concentrations of cases in a few areas. If a locality has a new-active-case rate twice as high as the rate for Iowa as a whole (6.6 per 100,000 in 1966), intensive neighborhood programs utilizing the tuberculin test and the chest x-ray will help protect the entire community.

D. **Adult Hospital Admissions.** Tuberculin testing of hospital admissions is less costly than an admission chest x-ray program. Although not infallible, the test yields unique information—the presence or absence of tuberculous infection. This information, plus that provided by the follow-up chest x-ray, helps detect both active cases and persons at high risk.

Tuberculin testing of adult admissions to general hospitals is recommended on an experimental basis.

E. **Industrial employees. Priority should be given to industries employing unskilled labor,** since it is known that the tuberculosis rate is highest in the lower socioeconomic groups. **Tuberculin testing of applicants for industrial employment, periodic retesting and periodic x-rays of positive reactors are recommended on an experimental basis.**

F. **Senior Citizens' Organizations. Tuberculin testing and x-raying of members of senior citizens' organizations are recommended on an experimental basis.**

Case and death rates and the incidence of new cases among nursing-home patients provide evidence of the prevalence of tuberculosis today among older people. Senior citizens' organizations may be a fertile field for the detection of active cases and persons at risk.

CONCLUSION

The success of the program depends greatly on the cooperation of the individual family physician. With his help, it is expected that the program outlined above will reduce the problems caused by tuberculosis.

Measles (Rubeola) Elimination in Polk County

JULIUS S. CONNER, M.D., M.P.H.,
PAUL M. PIETZSCH and KENT M. FORBES
Des Moines

WITH RESPECT TO MORBIDITY and disability, measles is a major childhood disease in the United States. The tools for eliminating it are readily available to each physician. However, in order to obtain the public acceptance necessary for the most effective use of these tools, organized community effort is required. Participation by physicians, health departments, civic groups, and education and welfare agencies is needed to assure a successful program.

This paper presents the results of organized community effort expended over the past several years in the measles-elimination program in Polk County, Iowa. The authors are hopeful that this experience will encourage physicians in other communities who contemplate efforts of this type.

Coordination and staff services for Polk County are furnished by the Immunization Assistance Program, a section organized within the Health Department under the federal Vaccination Assistance Act of 1962. Consultation

Dr. Conner is director of health, Des Moines-Polk County Health Department, Mr. Pietzsch is program coordinator and statistician, and Mr. Forbes is health educator, Immunization Assistance Program. This program is supported in whole by USPHS Service Project Grant No. V-67-16-40D.

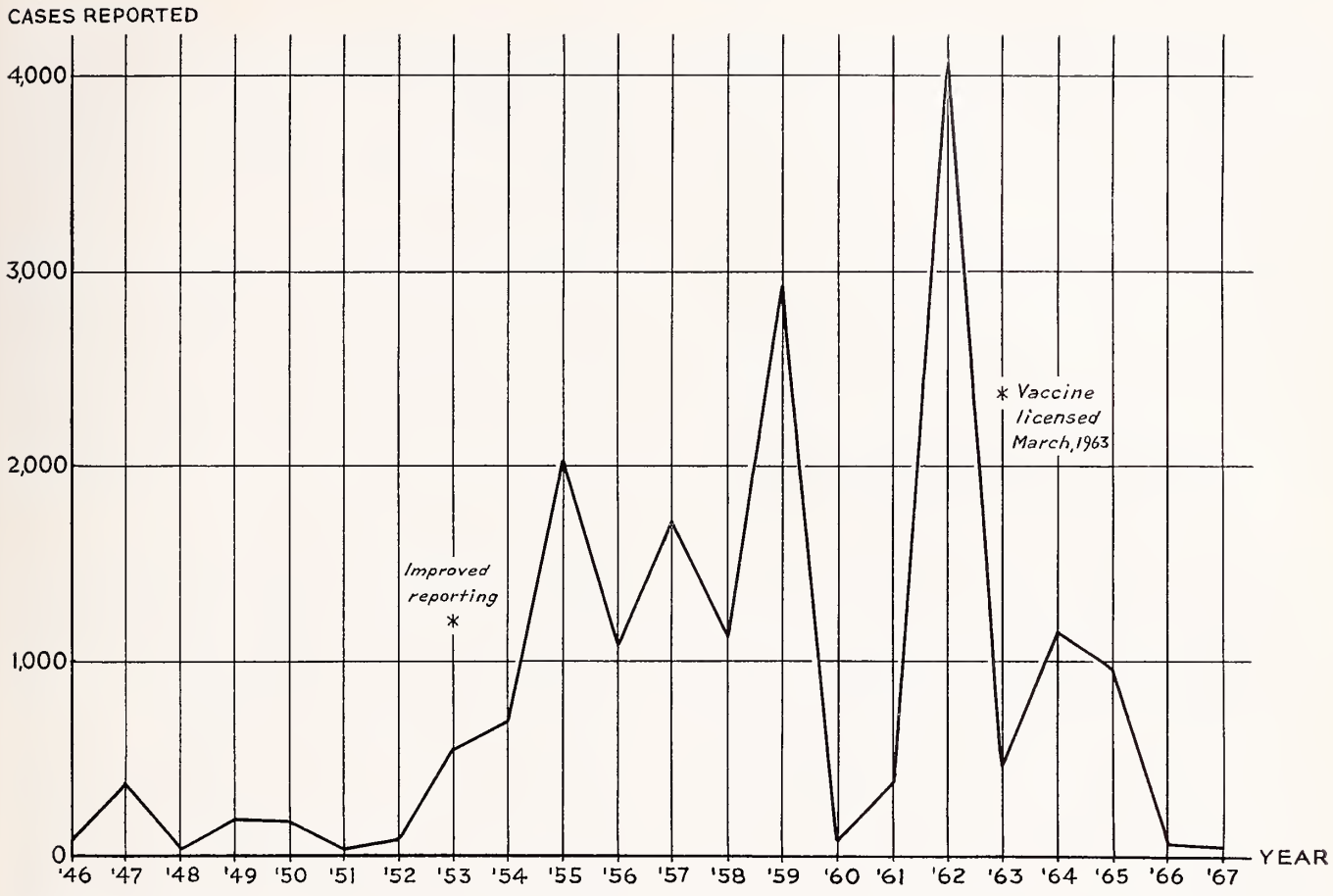


Figure 1. Measles cases reported to the Des Moines-Polk County Health Department by physicians, school districts, public health nurses and parents.

and guidance is provided by the Division of Preventable Diseases, Iowa State Department of Health. That state agency, upon request, will provide direct assistance to counties lacking local health departments.

MORBIDITY AND DISABILITY

Measles cases are reported to the Health Department by physicians, school districts, hospitals, clinics, public health nurses and parents. An analysis of those data (Figure 1) shows the cyclic pattern that characterizes rubeola infections. Epidemics occurred in 1955, 1959 and 1962. Another outbreak of illness was expected to occur in 1965 or 1966, but the advent of measles vaccine in 1963 disrupted the pattern. Over the past 2½ years a dramatic decrease in case reports has been noted.

The USPHS estimates reveal that 90 per cent of children develop measles at some time prior to adolescence. Nearly half of those affected show temporary electroencephalographic changes; one in 50 develops otitis media or pneumonia; and one in 1,000 contracts encephalitis. Mortality on the national level is estimated as one death per 10,000 cases.

ACTIVE IMMUNIZATION

Pooled gamma globulin was used for the prevention and attenuation of measles from 1945 to 1963. Temporary prevention of the disease in infants and chronically-ill children was achieved with a single intramuscular dose of 0.125 cc. per pound of body weight, given within seven days following exposure. Disease modification in healthy children was accomplished by a dose of 0.025 cc. per pound.

In 1963, after a decade of viral research and vaccine field trials, active immunization against measles became a reality. Two vaccines—live attenuated (Edmonston strain) and live further-attenuated (Schwarz)—are recommended by the American Academy of Pediatrics. These biologicals are safe and about 95 per cent effective, as evidenced by serologic conversion and resistance upon exposure.

Live attenuated (Edmonston strain) measles-virus vaccine is generally used in conjunction with an intramuscular injection of measles

immune globulin, 0.01 cc. per pound, in order to reduce the incidence of vaccine-produced fever and rash. Children who experience these side effects are neither infectious nor disabled. Live further-attenuated (Schwarz) measles vaccine has a low incidence of systemic reactions, and does not require the simultaneous administration of immune globulin.

Neither vaccine should be used when the child's immune response has been altered by malignancies, steroids and other resistance-depressing therapy or within six weeks of gamma globulin administration. Children highly sensitive to eggs but not to dog dander should receive vaccine prepared in canine-cell culture; the reverse situation requires vaccine from chick-embryo cell culture. Both types are commercially available. For theoretical reasons, measles vaccines are not recommended during pregnancy or within one month before or after other live-virus vaccines or the tuberculin test. Temporary false-negative tuberculin responses following measles immunization have been well documented. Immunization during the incubation period of measles is neither harmful nor effective.

ORGANIZED COMMUNITY EFFORT

The approach used in eliminating measles in Polk County was multi-pronged, and utilized a number of community resources. Private physicians, who generally administer approximately 85 per cent of the vaccine received by the child population, began using the vaccine immediately after it was licensed in 1963. The vaccine was made available to public clinics in 1965 by a Community Planning Council-United Community Services grant of $10,800 to the Health Department from excess funds raised on Sabin Oral Sunday. Vaccine availability was given an additional boost when in April, 1966, it was provided in large quantities through amendments to the Vaccination Assistance Act for preschool children. Measles vaccine is supplied to 19 ongoing public clinics and to private physicians upon request. In addition to those established resources, special efforts were made to hasten the elimination of measles.

In accordance with the recommendations of national medical organizations and the USPHS, Polk County carried out a successful mass measles clinic on October 16, 1966. End Measles Sunday was sponsored by the local medical societies and the Health Department. A great deal of assistance was provided by members of health, welfare and education groups and by members of organized labor, who served on planning committees headed by Leonard G. Gangeness, M.D.

It was the planning group's decision to concentrate its efforts in the low-income neighborhoods of the Des Moines metropolitan area. The 1964 immunization survey by the Health Department had indicated that those areas had the greatest need for immunization programs. Sixteen clinic sites in 10 elementary schools and six neighborhood Office of Economic Opportunity centers were used because of their availability to the people living in the lower socio-economic area. By the one-day effort 2,652 children were immunized. Thirty-eight physicians and their wives devoted 166 hours of volunteer service to the mass-measles clinic.

A four-point measles-elimination program was established in the spring of 1967, with the approval and cooperation of the Polk County Medical Society, the Polk County Society of Osteopathic Physicians and Surgeons and school officials. The plan follows that recommended by the USPHS surgeon general:

1. *Routine Immunization of Infants.* This practice has been incorporated into the regular infant-immunization schedules of virtually all practicing physicians and public clinics. The vaccine is given to the children at or shortly after 12 months of age.

2. *Immunization of School-Age Susceptibles.* The highest incidence of measles morbidity occurs among kindergarten and first- and second-grade students. The followup effort of End Measles Sunday included elementary-school clinics throughout the County. All schools which had less than 70 per cent immunization levels, according to the Polk County Medical Society's annual summary of preschool physical examinations, were included in this follow-up. Thirty-three separate elementary-school measles clinics have been held during 1966 and 1967, in which 2,405 children were immunized.

3. *Surveillance.* All private physicians and school nurses have been asked to report measles cases promptly to the Health Department by phone, giving the name, address and date of onset.

4. *Epidemic Control.* Whenever a case of measles in a school is reported, the diagnosis is confirmed by a physician prior to epidemiologic investigation by the Health Department. The source of the infection, unreported cases and susceptible children are located. A plan for immunizing all susceptibles within 72 hours is carried out in order to contain the epidemic. It usually consists of an emergency immunization clinic within the involved school. Nine epidemic-control clinics have been held during the past year, in which 1,021 children were immunized.

CURRENT LEVEL OF PROTECTION

The first status report following the introduction of the vaccine came about through a comprehensive immunization survey conducted in November, 1964. At that time the vaccine had been available only for approximately 18 months, and it was not yet available in the various public clinics. The resulting immunization level of 28.9 per cent among the preschool children was higher than expected. As one might have expected, there were wide variations among socioeconomic groups.

TABLE I

RESULTS OF POLK COUNTY MEASLES SURVEY, NOVEMBER, 1964

Socioeconomic Group	Children Under 5 yrs. Who Had Been Immunized—Per Cent
Upper—Des Moines	47.9
Middle—Des Moines	27.1
Lower—Des Moines	18.2
Suburbs—Polk County	24.2
Rural—Polk County	29.6

Presently there is little chance for an epidemic spread of measles in Polk County, for over 75 per cent of the children between one and 12 years of age are immune. Reports from the Department's Newborn Immunization Program, based on birth-certificate followup, indicate that nearly 80 per cent of the infants included in the program have received the vaccine by the time they reach 24 months of age. This program includes all newborns of Polk County residents except most of the 5 per cent

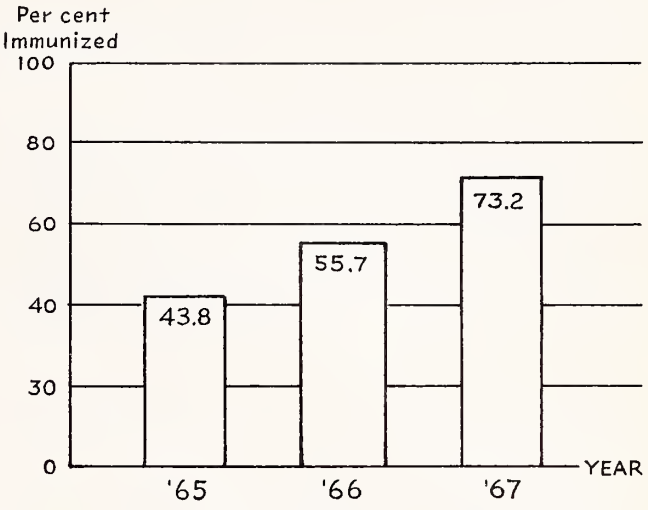


Figure 2. Annual Preschool Physical Examination Summaries.

out of wedlock births. Most infants of newcomers to the County are also lost to this continuous surveillance. A random telephone survey conducted by a group of student nurses from the University of Iowa in the spring of 1967 showed an 83 per cent immunity level (i.e., the youngsters had received the vaccine or had had the disease) among the County's one- to four-year-old children. The immunity level among the school-age children likewise has improved greatly over the past two or three years. The annual Preschool Physical Examination Program summaries for 1965-1967 (Figure 2) show a very definite upward trend. It is meaningful even though it is based on only a 50 to 60 per cent response.

An overall picture of the immunity level among school age children is shown in Figure 3. That graph is based on a survey conducted in October, 1967, of 22 elementary schools serviced by the Public Health Nursing Association. Those schools provide a reasonably good cross section of the County's population.

Variations among socioeconomic groups still exist. However, with emphasis placed on the lower socioeconomic group over the past few years, it seems the immunity level for that segment of the County's population has improved greatly since the first socioeconomic survey was made in November, 1964. A study was made in May, 1967, among the first-grade children in three elementary schools that are thought to be representative of the three socioeconomic groups (Table 2). An 80 per cent response was achieved.

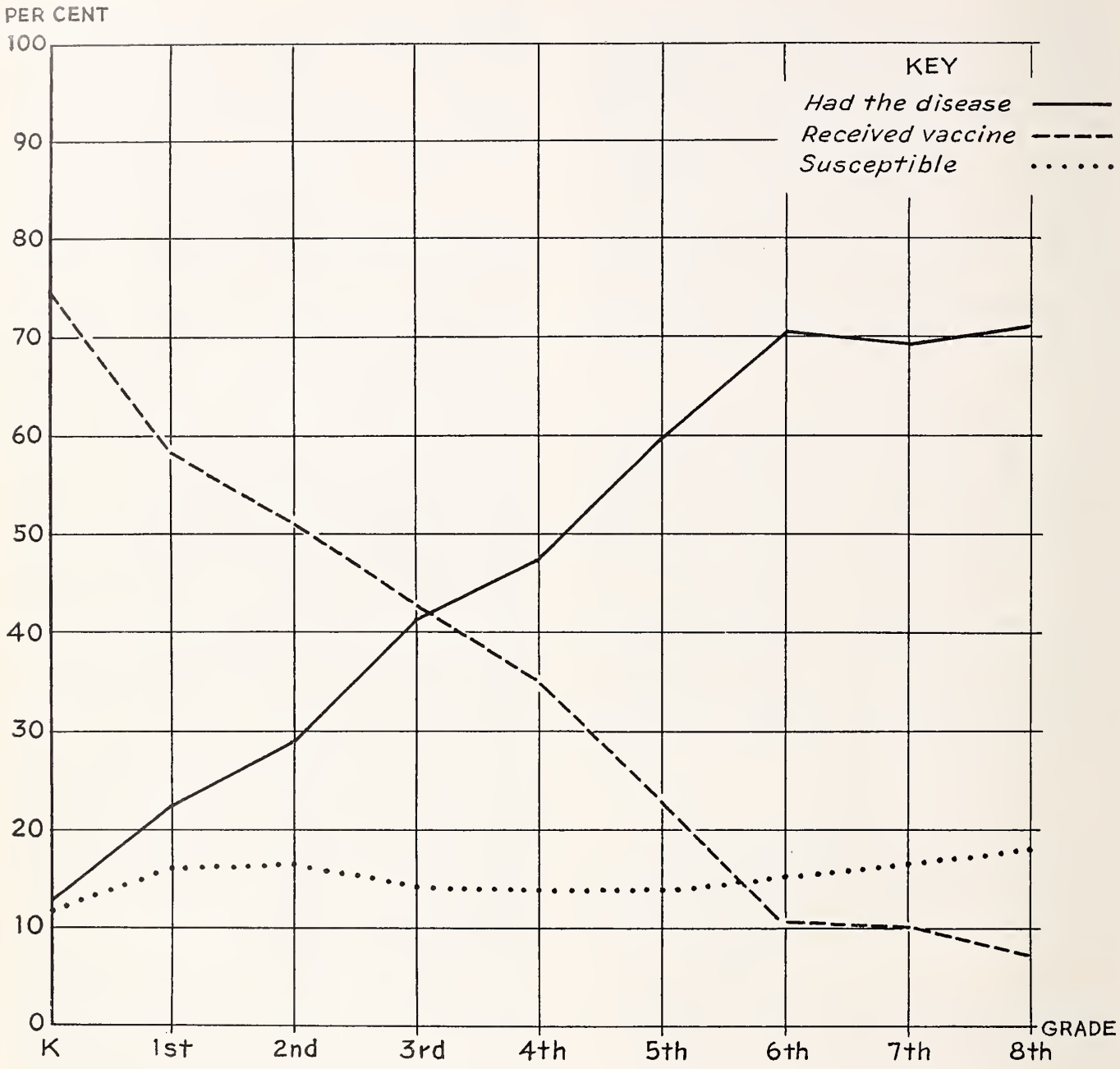


Figure 3. Overall picture of measles immunity level among school-age children in Polk County.

TABLE 2

RESULTS OF POLK COUNTY MEASLES SURVEY, CONDUCTED IN MAY, 1967
(First Graders in Three Representative Schools)

Socioeconomic Group	Had Received Vaccine (Per Cent)	Had Had the Disease (Per Cent)	Total Immune (Per Cent)
Upper	47.5	35.0	82.5
Middle	40.0	36.0	76.0
Lower	57.0	37.0	94.0

FUTURE PROGRAM DEVELOPMENT

The surgeon general's four-point program, as adopted by the local medical societies and the Health Department, will be used until measles cases are no longer reported. At that time measles-immunization levels will become the chief index of the program's success. Surveillance of those levels is presently being maintained for infants from three to 24 months of age, and for children when they enter school and again when they reach the seventh grade.

A continuous educational effort will be needed if public awareness and motivation of parents are to be maintained. Although it will be directed toward the parents and children who are under surveillance, the needs of the general public and the health professionals will not be ignored.

Cooperation by physicians and community agencies must also be a continuous one in order to maintain the objectives originally achieved. An active public health committee appointed by the local medical society serves this purpose exceedingly well.

ACKNOWLEDGEMENT

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Clinical Pathologic Conference No. 496

Abdominal Pain, Dicumarol, Shock

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MRS. REBECCA FRIEDMAN, Secretary

SUMMARY OF CLINICAL FINDINGS

A 53-year-old logger entered the University of Iowa Hospitals complaining of what he described as a "bound up" stomach of four days' duration. He had been well until about three weeks earlier, when he had been hospitalized elsewhere because of severe chest pain. His electrocardiogram there was said to show a possible myocardial infarction. After 10 days he had been discharged on Peritrate and two Dicumarol tablets daily. Four days before his admission here, he developed sharp abdominal pain that radiated into his chest and was associated with nausea and vomiting. He vomited some bright red blood, but he denied noticing tarry stools. His urine was tan-colored. His pain worsened, and he was readmitted at his hometown hospital and was given shots that reduced his pain. His hematocrit fell from 32 to 22 per cent during the day, and he was transferred to University Hospitals. The referring physician said that the patient's prothrombin time had been normal two days previously.

The patient had had rheumatic fever at the age of 30. He was once told he had high blood pressure. His mother had died at the age of 53 as a result of hemorrhage. No familial diseases were known.

The patient was pale, lethargic and weak. His blood pressure was 80/55 mm. Hg, and his pulse rate was 112/min. A grade II/VI diastolic rumble was heard at the apex. There was generalized abdominal tenderness, and the bowel sounds were diminished. No stool was present on rectal examination, but the patient vomited reddish, watery fluid that was positive for blood.

At his admission, his prothrombin time was 57.6 sec., with a control of 13.1 sec. On the following day it had dropped to 15.5, with a control of 13.5 sec. Subsequent values were 15.4 with a control of 13.0 sec. on day 2, and 18.7 with a control of 13.7 sec. on day 3. Other studies

included blood urea nitrogen 90, creatinine 6.7, CO_2 24.2, sodium 137, potassium 5.8 and chloride 92 mEq./L; albumin 4.0 and globulin 2.0 Gm. per cent; and serum glutamic oxaloacetic transaminase 600 and amylase 300 units.

The blood studies are summarized in the Table below.

The urine contained many red blood cells, but otherwise was normal. An electrocardiogram showed T-wave changes indicative of myocardial disease, and an anterior infarction could not be excluded. The chest x-ray was normal. Abdominal x-rays were compatible with paralytic ileus.

After the patient had been given two units of whole blood and 50 mg. of Mephyton intravenously, an increase in blood pressure and a decrease in prothrombin time occurred. Because of the gastrointestinal bleeding a nasogastric tube was inserted, and milk and Aludrox were infused. An upper-gastrointestinal x-ray examination done on the following day showed a small hiatus hernia, with reflux. Subsequently, abdominal distention developed, and nasogastric suction and a rectal tube failed to produce much relief. Gross hematuria occurred. Mephyton, 10 mg., intravenously, was given on day 2 and again on the next day. Hypotension ensued, with marked increases in abdominal pain and distention. There was no response to Aramine. An abdominal needle puncture returned gross blood. Then the patient suddenly vomited blood and died.

Dr. Raymond F. Sheets, Internal Medicine: CPC No. 496 is the case of a 53-year-old logger with a "bound up" stomach. Mr. Philip Pugh will discuss the protocol for the students.

Mr. Philip Pugh, junior ward clerk: We believe that this man's primary disease process was generalized atherosclerosis associated with hypertension. Secondarily, we believe that he developed three specific lesions, the third of which led to his death: (1) chronic renal insufficiency due to renal artery atheromatosis, or possibly to arterio- or nephrosclerosis; (2) coronary artery disease, with an old myocardial infarction, probably subendocardial; and (3) a ruptured abdominal aortic aneurysm. I should now like to support our diagnosis, briefly.

The patient was a 53-year-old man who had been told some time earlier that he had hypertension, and whose mother had died of hemorrhage. Three weeks before his admission here, he had been hospitalized for 10 days because of a possible myocardial infarction, and then had been discharged with instructions to take anticoagulants and long-acting nitrate. Three days before his admission here, he developed sharp abdominal pain, excreted tan-colored urine, vomited blood and showed a drop in hematocrit from 32 to 22 per cent.

It was at that point, we believe, that he first bled from an abdominal aneurysm. The hematuria probably resulted from the impingement of a retroperitoneal mass on his ureters. When he was admitted to University Hospitals, he had decreased bowel sounds, generalized abdominal tenderness and x-ray evidence of paralytic ileus. We related those findings to blood in the peritoneal cavity or retroperitoneum. The patient's markedly elevated blood urea nitrogen and creatinine values indicated a decreased glomerular filtration rate of some duration, and it in turn suggested chronic renal insufficiency. The elevated creatinine, along with the high BUN, tended to rule out prerenal azotemia as a part of his problem. His serum amylase of 300 units was suggestive of pancreatitis, but also was consistent with renal in-

Day	White Blood Cells	Differential	Platelets	Hematocrit	Hemoglobin
0			220,000	23	
1	16,850	27 bands; 50 segs; 7 lymphs; 13 monos; 1 myelo.		31	10.8
2				28.5	10.2
3	4,200	48 bands; 26 segs; 10 lymphs; 6 monos; 1 myelo.		27	9.0

sufficiency. His high serum glutamic oxaloacetic transaminase could have been due to hepatocellular damage secondary to shock, to intestinal obstruction, to mesenteric infarction, to renal infarction or even to anticoagulant medication.

The patient's increased prothrombin time probably was due to his Dicumarol medication. The values returned to near normal following whole-blood and vitamin-K_1 therapy.

There was moderate leukocytosis with a shift to the left. The apparent leukopenia on the patient's third hospital day probably was a clinical or a laboratory error.

Finally, on the third day, the patient became hypotensive, and had increased abdominal pain and distention. Shortly before his death, an abdominal tap revealed gross blood in the peritoneal cavity.

The diagnosis of ruptured abdominal aortic aneurysm was summarized by Dr. John Mannick, recently, in the NEW ENGLAND JOURNAL OF MEDICINE. In the majority of cases following rupture, the patients presented with weakness and circulatory collapse, and they revived only to die anywhere from several hours to several days later from exsanguinating hemorrhage. Many abdominal aneurysms rupture into the small bowel, especially the duodenum, and the dominant symptom may be upper-gastrointestinal bleeding. After rupture, the distinct murmur and the abdominal mass are obliterated and may not be found. In such cases a diffuse tenderness of the abdomen may be the only physical finding. Femoral pulses are usually palpable, despite proximal aortic rupture. Laboratory tests for the patient under discussion here revealed leukocytosis and microscopic hematuria, and x-rays of his abdomen showed loss of the psoas shadow.

There are many disease states which we cannot exclude from consideration. Of special importance is polyarteritis nodosa, which can produce a clinical picture identical with the one we are discussing today. However that diagnosis would require a biopsy of affected tissue. Marfan's syndrome with an abdominal aneurysm could mimic this patient's situation. Acute hemorrhagic pancreatitis is another possibility. We have no information regarding the man's previous alcoholic intake, or about a history of gallbladder disease, but neither of those factors would explain his hematuria. Consumption coagulopathy is ruled out by the normal platelet count. A perforated duodenal ulcer is not suggested by the patient's past medical history, and it would not have caused his hematuria. Other complications of what we consider his primary disease—namely atherosclerosis and hypertension—may have been involved. These include atheromatous emboli and mesenteric-artery thrombosis. Furthermore, it is possible that this man suffered from several unrelated diseases such as primary cardiac, renal, hepatic or gastrointestinal infections or even hematopoietic problems.

To repeat, it is our opinion that this patient suffered from generalized atherosclerosis with an associated hypertension that led to chronic renal inusfficiency, coronary artery disease and finally death from a ruptured abdominal aortic aneurysm.

Dr. Sheets: Dr. Theilen will discuss the protocol for the faculty.

Dr. Ernest O. Theilen, Internal Medicine: That was a very nice discussion of the problem, Mr. Pugh.

All of you probably noticed, as I did, that Dr. Warner was carrying a large book as he walked into the room. I suspect that it may be indicative of a bit of CPC gamesmanship, and that the patient will be found to have had an unusual problem.

The information available to us is extremely limited, and under the circumstances I can only speculate about what may have happened to him. Nevertheless, let's see what deductions can be made. When this man was first hospitalized, the presumptive diagnosis must have been myocardial infarction. His electrocardiogram is said to have shown signs of an infarct, but we are not told whether the evidence consisted simply of Q-wave changes, which might have been the consequence of an old infarction, or whether there were also some segment abnormalities suggestive of a recent infarction. I am inclined to think that a diagnosis of acute myocardial infarction may not have been considered very seriously, for he was discharged from the hospital after only 10 days.

The protocol contains no mention of serum-enzyme determinations. In a modern hospital,

I cannot conceive of a man's being admitted with severe chest pain and electrocardiographic signs of myocardial infarction and not undergoing determinations at least of his serum glutamic oxaloacetic transaminase over several days. I conclude, therefore, that this patient with severe chest pain and a suspected myocardial infarction probably had signs only of an *old* infarction. That is to say that he had no acute segment changes and had normal serum enzymes. For that reason, I suppose, he was discharged from the hospital after only 10 days.

Why was he discharged from the hospital on Peritrate and Dicumarol? We do not know whether or not he had angina. If he did not, there was no reason to treat him with a drug intended to relieve angina. In my opinion there is no point in using such drugs to treat asymptomatic coronary-artery disease, and I prescribe them only when the patient is suffering from the symptoms of angina pectoris. I believe that they should be used after a myocardial infarction only under the circumstances that I have indicated. The reason for prescribing an anticoagulant is also unclear. It would have been justifiable in a case of acute infarction, but as far as I know there is no proof that an anticoagulant will *prevent* an infarct. Only in exceptional cases would I prescribe anticoagulants on a long-term basis for a patient who has recovered from a myocardial infarction.

What possible relationship was there between the sharp abdominal pain he experienced four days before admission and either his preceding illness or his anticoagulant therapy? The pain was accompanied by nausea and vomiting. He might have had an acute myocardial infarction. An infarct involving the diaphragmatic surface of the left ventricle certainly can present as a gastrointestinal problem, and the symptoms of nausea and vomiting are not unusual. The hematemesis is of questionable significance. We are given no indication concerning its amount, and he may have had anything from slight streaking, of dubious significance, to a major gastrointestinal hemorrhage. I do not know what the comment about "tan" urine is supposed to mean, for I have never seen a "tan" urine. Perhaps someone is trying to tell us that the patient had hematuria.

Reading further, it is evident that the patient had a significant blood loss, although once again we have no good indication of the source of that loss. Perhaps he had bleeding from a duodenal ulcer, but pain rather infrequently accompanies gastrointestinal bleeding, and one would have to postulate that there was either penetration or perforation of the ulcer at the same time. That seems a bit unlikely under the circumstances. We know that the patient had a small hiatus hernia, but again in view of additional information it seems unlikely that it was the source of his blood loss. Another thing that comes to mind is the possibility of a dissecting aortic aneurysm, perhaps with perforation into the gastrointestinal tract. In any event, it is obvious that this man bled and must have bled rather massively, for not only did he have a considerable fall in hematocrit, but by the time he reached University Hospitals he was hypotensive. Despite the information that his prothrombin time was normal two days before admission, we must not overlook the possibility of a hemorrhagic diathesis secondary to treatment with Dicumarol.

With reference to the physical examination, the protocol contains a comment that the patient had a Grade II diastolic rumble at the apex. Do we know what his rhythm was at the time? Did he have any other evidence of mitral-valve disease? If he had a sinus rhythm, did he have presystolic accentuation of the murmur? Since he was hypotensive, he might not have had right-ventricular overaccessibility, but if he had mitral stenosis there is a reasonable expectation that an opening snap of the mitral valve might have been audible. I gather that the diastolic rumble was an isolated observation, and that there was no other evidence of mitral-valve disease. Is that correct?

Dr. Sheets: P-2 was loud in the left second interspace.

Dr. Theilen: The examiner found generalized abdominal tenderness and some diminution in bowel sounds. These findings would be compatible either with bleeding into the peritoneal cavity or even with perforation of a dissecting aneurysm into the gastrointestinal tract.

I was going to ask Dr. Sheets for the electrocardiograms that he has just handed to me. I should say that there is unequivocal evidence

of an old myocardial infarction here. QS deflections are present in leads V-1, V-2 and V-3. There are no ST-segment abnormalities, and thus I am not led to suspect a recent or acute myocardial infarction. Some of the T waves are inverted in the precordial leads, but it would be hard to say that the tracings are diagnostic of acute infarction.

I find one other thing that is rather disturbing on the electrocardiographs, and was not commented upon in the protocol. The P waves recorded in standard leads II and III are very large. Not only is the voltage increased, but the contour represents the type of change which is usually associated with right atrial hypertrophy and dilatation. I see nothing, however, to suggest involvement of the left atrium, and thus from an electrocardiographic standpoint there again is nothing which would help us to make a diagnosis of mitral stenosis or would suggest that we should further evaluate the diastolic rumble that was described.

Dr. Cohen, may we see the chest x-ray?

Dr. William N. Cohen, Radiology: The x-ray examination of the chest was normal.

Dr. Theilen: What about the aorta? Was there evidence of any widening of the aorta?

Dr. Cohen: No, it looks perfectly normal.

Dr. Theilen: I presume that this film was taken on admission.

Dr. Cohen: It was taken on the day *after* admission.

Dr. Theilen: This tends to rule out the possibility of dissection of the aorta, since I should expect the dissection to start somewhere in the thoracic aorta.

I made a passing comment earlier about the rather remote possibility of a perforated ulcer. If the patient did have a perforation, I wonder whether we might not expect to see some air under the diaphragm.

Dr. Cohen: There is no evidence of perforation on the available films.

Dr. Theilen: I understand that paralytic ileus was demonstrated by the gastrointestinal series. Is that correct?

Dr. Cohen: The order, as listed in the protocol, isn't quite accurate. According to the dating of the films, the upper-gastrointestinal examination was done initially, and an ileus was demonstrated later on that same day.

Dr. Theilen: The next question which we must answer concerns the relationship between the bleeding and the Dicumarol therapy. The protocol states that the prothrombin time was markedly prolonged, being 57 seconds on admission, but you will notice that following treatment it fell rather quickly so that on subsequent days there was no significant prolongation. If the bleeding was on the basis of a depression of the clotting factors, it is unlikely that he would continue to have massive bleeding following such a prompt reversal of the prothrombin time. For this reason, I think that we still need to look for another explanation.

I can do no more than speculate about the abdominal pain. The pain, the bleeding into the gastrointestinal tract, the ileus and even the microscopic hematuria could all have been explained as results of dissection of the aorta, but again there is no way, at this point, to make a firm diagnosis of dissection. We simply do not have adequate information. It is quite possible that the hematuria and gastrointestinal bleeding were consequences of the anticoagulant therapy without invoking any other vascular changes, including embolic phenomena.

If I were to make a single diagnosis in this case, I would seriously consider a dissecting aneurysm of the aorta. It might or might not have been complicated by the anticoagulant therapy. Whether or not a recent myocardial infarction played a part in the chain of events is difficult to determine.

Dr. William B. Bean, Internal Medicine: There are two situations which might have been associated with embolization. He might have had mitral stenosis, and I suspect that he did. Or if he had a myocardial infarction, he might have had mural thrombi. In persons taking anticoagulants, embolization may cause hemorrhage.

Dr. Theilen: The patient did not have mitral stenosis, Dr. Bean. I do not mind making that rather emphatic and dogmatic statement. My reason is that in such an event he should have had more physical findings for mitral stenosis than those which were described. In this protocol the only evidence for mitral stenosis is a vague reference to a Grade II diastolic rumble without presystolic accentuation in a man who had a normal sinus rhythm. Granted that there

were some changes in the P waves on the electrocardiogram, but they were not of the type that would be associated with mitral stenosis. The cardiac silhouette on x-ray in no way really suggested enlargement of the left atrium or others of the changes which are to be found in mitral stenosis. I think it is most unlikely that this man could have had an embolus arising from a clot in his left atrium.

Dr. Bean: How about the left ventricle?

Dr. Theilen: You are referring, of course, to embolization from a mural thrombus secondary to myocardial infarction. That would indeed be a possibility, but I have already commented upon the problem of establishing the diagnosis of acute infarct or recent infarct in this patient. We simply have insufficient information to establish it.

Dr. Sheets: What do you think caused those peaked waves, Dr. Theilen?

Dr. Theilen: I don't know. I think that Dr. Bean raised the question about P-wave changes secondary to pulmonary embolism. That, of course, is a possibility, but again we have no history to suggest such an episode. I do not believe that pulmonary embolism would explain this man's symptoms as they have been related to us in the protocol.

Dr. Emory D. Warner, Pathology: Didn't he have enzyme studies here?

Dr. Sheets: Yes, there was a SGOT of 600 on the day of admission.

Dr. Theilen: That determination was made rather late in the course of the patient's illness, rather than at the time when, it was presumed, he had a myocardial infarct.

Dr. Sheets: That is correct.

Dr. Cohen, would you like to show us the other x-rays?

Dr. Cohen: In the upper-gastrointestinal examination (Figure 1), a small esophageal hiatus hernia was demonstrated. The stomach and duodenal bulb were intrinsically normal. However there was medial displacement of the stomach by a left-upper-quadrant mass.

A delayed film the same day demonstrated a generalized dilatation of bowel consistent with paralytic ileus.

Dr. Henry E. Hamilton, Internal Medicine: A diastolic murmur is not considered an innocent sound according to our clinical lexicon, Dr. Theilen. With that significant sign—a diastolic murmur near the apex—what disorders must be included in the differential diagnosis?

Dr. Theilen: There are a number of them, most of which are not pertinent to this discussion. Mitral stenosis, of course, is the commonest cause of an apical diastolic rumble. It can also be heard as the Austin-Flint murmur in a patient with predominant aortic insufficiency. A diastolic rumble might be heard in a patient with a myxoma of the left atrium. (Incidentally, systemic arterial embolization is not uncommon in patients with myxomas of the left atrium.) A diastolic-flow rumble can be heard in patients with large interatrial septal defects because of the increased flow across the tricuspid valve.

Dr. Hamilton: Would you say that this man might have had any one of those four condiditions as the cause of his diastolic rumble?

Dr. Theilen: I think that "diastolic rumble" was probably a misinterpretation. With no more information than the protocol conveys, I should ascribe little worth to that interpretation. Whoever made that observation should automatically have looked for supporting evidence, and finding none should at least have commented on its absence. This would have been what I refer to as "pertinent negative information." It was not given us.

Dr. Bean suggested mural thrombosis and embolization. There is another possibility that we have not mentioned. We know that the patient had a myocardial infarct at some time or other, and if he developed a myocardial or a ventricular aneurysm, embolism might have occurred from the thrombus which frequently is associated with such aneurysms. If he did embolize, from whatever source, why did he bleed? We must not overlook the fact that he was treated promptly with vitamin K, and that there was subsequently a rather rapid reversal of his prothrombin-time elevation. It seems somewhat unlikely that he would have continued to bleed as a consequence of a defect in his clotting mechanism.

Unidentified questioner: Would hemorrhage explain his high BUN and creatinine?

Dr. Theilen: No, it wouldn't explain the high creatinine. The blood urea nitrogen, of course, could have been somewhat elevated because of



Figure 1. Upper-gastrointestinal examination. A left-upper-quadrant mass has displaced the stomach medially, and a small esophageal hiatus hernia is also evident.

blood in his gastrointestinal tract. Nevertheless I think that something else must have been going on.

Questioner: What was his prothrombin time?

Dr. Theilen: The protocol says that his prothrombin time was normal two days before he came here. Whether it actually was or was not, we do not know. I should not expect it to go from a normal value to almost 58 seconds in two days without any change in his maintenance dose of Dicumarol.

Dr. Sergio Rabinovich, Internal Medicine: What does the mass in the left upper quadrant represent, Dr. Cohen?

Dr. Cohen: A left-upper-quadrant mass in this location would most likely be an enlarged spleen.

Dr. Sheets: Dr. Warner will present the autopsy findings.

Dr. Warner: This man died of massive hemorrhage into the peritoneal cavity. The hemorrhage, however, was not from a ruptured aneurysm, but from a ruptured spleen. He had a 300 Gm. spleen, as nearly as could be determined. A huge, subcapsular hematoma was continuous with hemorrhagic and necrotic splenic pulp, and through a rent in the capsule it was continuous with about 1,200 cc. of par-

tially-clotted blood in the peritoneal cavity. The patient did have myocardial infarctions, both old and recent. Actually there was a two-stage recent infarct. The infarct was in the distribution of the anterior descending branch of the left coronary, which was atherosclerotic and occluded about 2 cm. distal to its origin.

Dr. Theilen: A transmural infarct?

Dr. Warner: As described, it was close to transmural, although there was no mural thrombus at autopsy. His heart weighed 390 Gm., and thus was a little bit hypertrophied, and the left ventricle appeared to be a little thick. The valves were grossly normal for a man of his age. He had no interventricular or interatrial septal defects in the heart. He had moderate atherosclerosis of the coronaries without appreciable narrowing except for the one branch that was occluded. He did have mild nephrosclerosis, but the changes were not severe, and from the appearance of the heart I think his hypertension wasn't especially severe or of long duration. In general, his atherosclerosis was moderate for a man of his age.

Now in addition to the myocardial infarction, both old and recent, and the splenic lesion with its massive hemorrhage, the patient had extensive superficial ulceration in the distal half of his small bowel and in his colon. That ulceration was associated with a necrotizing acute cellulitis that was teeming with a mixed culture of organisms.

The lungs were quite edematous, and that condition was interpreted grossly, at the time of autopsy, as hemorrhagic edema associated with heart failure. Actually, it was a necrotizing pneumonia, again teeming with bacteria. Staphylococcus aureus and Proteus were both cultured. Histologically, there was a very violent inflammatory reaction mixed in with necrotic tissue. The sepsis could have happened in the final two or three days.

As an incidental finding, we noted multiple adenomata of the kidneys. These were up to 0.5 cm. in the diameter, and there were perhaps a dozen of them.

The first slide is of the spleen. This picture shows the massive blood clot that was continuous with clots in the peritoneal cavity. This is splenic pulp, which was intact, and here is the edge of a large area of necrosis of splenic pulp.

As for the sequence of events, I think we can only guess. No occluded vessel could be demonstrated, arterial or venous, leading to this area in the spleen at the time of autopsy. There was no grossly-outlined infarct that could be clearly identified as such. The necrosis in the spleen was all mixed up with hemorrhage, and was rather superficial and under the subcapsular hematoma—the sort of thing that we see with a traumatic rupture of the spleen, with subcapsular hematoma and massive hemorrhage into the splenic pulp. Under the splenic capsule we often see quite a great deal of superficial necrosis of the spleen, which in part, I think, is the result of the pressure of the subcapsular hematoma. In this patient we did not demonstrate a clear-cut infarct as the original cause of the splenic lesion.

Next slide. This is a section of heart. The myocardium of the left ventricle is visible along here. There are a very few leukocytes here. Then this is all necrotic myocardium, and when we get down to here there is a zone of heavy neutrophilic leukocyte infiltrate. This constitutes evidence in support of my guess that there were, perhaps, two ages of recent infarction. It would take four or five days to get this zone of leukocytic reaction, and it is quite a distance in from the edge of viable tissue. Were it all the same age, I should rather expect the leukocytic zone to be at the junction of viable muscle. So I think that the patient had an infarct here, and more recently a spread of the infarct to this area.

Next slide. This is also from the left ventricle and in the distribution of the anterior descending branch. It represents an old infarction that antedates the patient's admission to his local hospital.

Next slide. This is a section of bowel showing a necrotizing cellulitis with sloughing of the mucosa. This smudged, blue debris consists of colonies of bacteria. There were myriads of bacteria throughout the tissue. There was thrombitis of the venules in the submucosa that I think may well have been secondary to the cellulitis.

Next slide. This is a section of lung showing a necrotizing pneumonia mixed with a hemorrhagic edema, again with myriads of bacteria. Next slide. This is a bacterial stain showing

colonies of gram-positive cocci and myriad organisms, predominantly cocci but with an admixture of gram-positive bacilli. As I said, Staphylococcus aureus and Proteus were cultured. Next slide. This is a section of kidney showing well-preserved renal parenchyma. There was very little evidence of nephrosclerosis. This is the edge of one of the numerous small adenomata of the renal tubules that were present as an incidental finding.

Dr. Theilen: How often have you seen hemorrhage into the spleen as a consequence of anticoagulant therapy, Dr. Warner?

Dr. Warner: I don't think I have ever seen it. The sequence in this case is not entirely clear, however. I think this man's infarction probably was quite recent, that it came along when he was in profound shock, and that his shock was so profound that he failed to respond. I think the infection was a rather late thing. There was a focus of suppuration in the kidney to go along with his sepsis, but there was no evidence of suppuration in the spleen. Thus I think the splenic lesion was not originally an abscess. He had blood in the gut, but of course that blood could have come from his acute ulcerative lesion. He also had blood clots in both renal pelves and in the bladder, with no renal lesion to account for the bleeding. I think that at one time he did have Dicumarol bleeding, since he bled into the urinary tract for no good reason. Also, he probably had bled into the gastrointestinal tract before the necrotizing ulceration occurred, and at that time he may have bled into the spleen and built up a big subcapsular hematoma. He may well have had a bleeding tendency.

The terminal event was rupture of the huge subcapsular hematoma, with mass bleeding into the peritoneal cavity.

I think I can make sense out of everything except the bleeding into the spleen. Even with coumarin poisoning, I should hardly expect spontaneous hemorrhage into the spleen. The patient had no mural thrombus in the heart; he had no thrombi other than those that you saw in the acute cellulitis in the submucosa of the gut. I suspect that he may have had a mural thrombus in the heart, and that he may have had a fairly sizeable infarct in the spleen. Thus, he may have started to bleed into the spleen as a part of his Dicumarol-induced hemorrhagic diathesis. In my experience that has not been a common site for spontaneous hemorrhage. Patients bleed into the gastrointestinal tract; they bleed into the urinary tract; they bleed into the skin; and they bleed into the brain; but they do not ordinarily bleed into the spleen. Thus I suspect that this man had a lesion there. Finally, it is difficult to exclude trauma as the possible initiating factor.

Dr. Theilen: I have one other question. If the patient's prothrombin time had fallen from 57 seconds to 15 seconds on the following day, would you expect him to have bled subsequently?

Dr. Warner: Probably not from normal tissues, but I think he might well have bled from the splenic lesion, if my surmise is correct that he already had a great subcapsular hematoma with necrosis of the spleen. Also, I think he might well have continued to bleed into the gut from the lesion of the gut, without having any hemorrhagic tendency. But with that degree of correction, I should hardly expect him to have a real hemorrhagic tendency from his Dicumarol poisoning.

However one essential procedure was omitted. He had been on Dicumarol for a considerable time, and the one-stage prothrombin determination could not pick up a depressed factor IX that he could also have had. We really need a TGT to tell us how well his overall clotting picture had been corrected.

Dr. Theilen: He had been taking Dicumarol for about three weeks, in all.

Dr. Warner: In three weeks, with severe Dicumarol effect he could have been lacking in factor IX.

Dr. John C. Hoak, Internal Medicine: What was the relationship between the gastrointestinal series and the second bleeding episode?

Dr. Sheets: The gastrointestinal series was done on the second hospital day. The patient came in on one day, the GI series was done on the next day, and the bleeding was going on during that time.

Dr. Rabinovich: Dr. Warner, was there any source of bleeding in the upper-gastrointestinal tract?

Dr. Warner: There was ulceration of the

small bowel, and there was some acute gastritis but no ulceration of the stomach.

Dr. Sheets: Dr. Ziffren, would you like to tell us how to avoid missing a ruptured spleen the next time? Since the surgeons weren't involved in the management of this case, you are free to chide the internists.

Dr. Sidney E. Ziffren, Surgery: I don't intend to criticize anyone. However the protocol says that generalized abdominal tenderness was noted, and apparently no one paid any attention to that finding. Increasingly, I find that someone records the finding of abdominal tenderness. Now that is a serious finding. If a patient has abdominal tenderness, something is abnormal, and if the patient does not have true abdominal tenderness a statement to that effect has no business in the record. The examiner either does not know how to conduct an examination, he has misinterpreted a physical finding, or something else is wrong with the patient.

Why did this man have rupture of the spleen? I have always felt that there must be some pathologic change to cause spontaneous rupture of that organ. I have heard of rare instances in which normal spleens have ruptured, but I have never seen such a case. The patient must have some disease such as malaria, typhoid fever or lymphoma to suffer spontaneous rupture of the spleen. I note that the protocol says the patient was a logger. Perhaps he was a pretty tough man, and in consequence he perhaps was handled violently; perhaps he fell out of bed. Maybe that was why he developed a subcapsular hematoma. Ordinarily, unless the patient has a history of trauma, about the only findings are gradual enlargement of the spleen and diaphragmatic pain referred to the left shoulder. Sometimes tenderness is displayed in the abdomen, and it may be restricted to the left upper quadrant. Ordinarily, however, a leukocytosis is quite evident. A plain roentgenogram of the abdomen may show air in the stomach, with serrated edges. That is a very positive clue. A hazy shadow in the left upper quadrant of the abdomen and elevation of the diaphragm are also very suggestive. The fact that an upper-gastrointestinal series showed displacement of the stomach should have alerted someone. Was that information provided by the roentgenologist, Dr. Cohen?

Dr. Cohen: I assume that the statement was not made.

Dr. Ziffren: The protocol says that the stomach showed no evidence of a filling defect, an ulcer or changes in contour. Thus, obviously it was missed by the man who did the radiologic study. If the subcapsular hematoma hasn't yet ruptured, an abdominal tap won't reveal anything. In fact a tap sometimes is unsuccessful when the spleen has already ruptured. But the possibility of failure should not discourage anyone from doing the procedure. In general, anyone who has had something happen to his spleen shows signs of it. He has tenderness, with or without a little rigidity, and in many instances shoulder pain. One pays attention to the roentgenograms and looks for leukocytosis. Also, if the hematocrit or hemoglobin level keeps falling, one has reason for concern.

My plea is for a careful performance of the physical examination and for repeating it if no answer is obtained on the first examination. This is the only method for arriving at difficult diagnoses. There is no easy way.

Dr. Sheets: Another important facet of this patient's difficulty was his infection. Dr. Smith, do you have any ideas about that aspect of the case?

Dr. Ian Maclean Smith, Internal Medicine: Here, as in the other parts of this patient's problem, I think there are complicating factors. In general we recognize infection in four main ways: known clinical syndromes; fever; a rise in white blood cell count; and some visible inflammation or pus. In this man I don't think one could say there was any clinical syndrome indicating infection. Temperature abnormalities can be nullified by shock, by the use of steroids or by the presence of uremia. In normal old people the temperature is often two or three degrees lower than in normal people of a lesser age, and a slight elevation may go undetected. As for the white blood count, it rises in bleeding cases, and as we just heard, it also rises in spleen rupture. Necrosis will also cause a rise in white-cell count. This man is said to have had a myocardial infarction, but based on my experience, his count was a little high for myocardial infarction. In diabetic acidosis, we also get high white-cell counts.

Now he had no local inflammation, and he

had no visible pus. In regard specifically to staphylococcal infection, we find from the autopsy report that his blood culture was positive and that he had gram-positive cocci both in the lung and in the gut on specific staining. Although he also had a Proteus infection, his staphylococcal infection was the principal one. In staphylococcal pseudomembranous enterocolitis—either spontaneous or following the use of antibiotics—one tends to get a count of between 15,000 and 25,000/cc., although concentrations as high as 60,000/cc. have been recorded. Antibiotics, particularly tetracycline, have predisposed some of these people to this disease. A tetracycline-resistant staphylococcus can get into the stool, and in certain series about 4 per cent of patients on tetracycline have developed this complication. Blood, of course, is a very good culture medium, and blood in the gut—from a Dicumarol overdosage, let's say—would be a good medium for the multiplication of staphylococci.

This man had a rise in blood urea nitrogen, creatinine and serum glutamic oxaloacetic transaminase, and thus he comes into an area that Dr. Rabinovich and I, together with some of our colleagues in the laboratory, are interested in. Why do animals, and why do people, die of staphylococcal infections?* As far as we can tell, several things go wrong. Three of them are a BUN rise, a creatinine rise and a SGOT rise. We find those factors in mice, and we also have found them on the day of death or the day before death in people dying of septicemia Some of this rise of chemical values may be due to staphylococcal septicemia. In animal experiments we find that perhaps the leading biochemical lesion is in the electron-transport chain. In this area, Dicumarol is an inhibitor. We have only recently become interested—in fact just last week—in the use of Dicumarol in these animals, and we feel, on the basis of theoretical considerations, that it ought to make the infection less severe. Probably, but not certainly, it makes it more severe. I believe that Dicumarol may have had some part in this man's infection, although we have only preliminarily pertinent data. This man had infection, as we heard, but I don't think it was diagnosable during his lifetime. There are certain phenomena that interfered with the diagnosis. Some of his biochemical findings might fit just as well with his infection as they would with other things that were found wrong with him.

Dr. Sheets: I think we should remember one thing about spleens. The large spleens of infectious mononucleosis rupture with very little trauma, and sometimes spontaneously.

Dr. Edward E. Mason, Surgery: I have been trying to get Dr. Kenneth Walgren to comment on a patient of his who was found to have a spontaneously ruptured spleen. The patient—actually a physician in this hospital—had been having some pain in his left shoulder for about five days. He had infectious mononucleosis, and Dr. Walgren made a diagnosis of ruptured spleen and we confirmed it at operation.

I have looked up a recent paper by Sakulsky and others* reporting ruptured spleen in infectious mononucleosis. They said that it is the second commonest condition in which spontaneous rupture of the spleen occurs, the commonest being malaria. They had found reports on 45 other patients. I wonder whether this patient could conceivably have had infectious mononucleosis three weeks earlier, and whether he could have had a hemorrhage at that time. Then the pain that occurred this last time —three weeks later—could have represented delayed rupture into the peritoneal cavity. At the latter time his differential count had returned almost to normal. The physician-patient whom I mentioned earlier had a highly abnormal differential count at the time of his splenic rupture, but within three weeks his differential was back to normal. Could a sealed-off hemorrhage have been present for three weeks before the delayed rupture?

Dr. Warner: I don't think the big subcapsular hematoma could have been there for three weeks. The sections that were available for study did not show anything that I think was as old as that, and on the last day of the patient's life he had a pretty clear-cut episode of rapidly increasing belly pain and distention, after which he went rapidly downhill and died. That course, I think, correlates pretty well with the rupture of his subcapsular hematoma and

* Smith, I. M.: Death from staphylococci. SCIENTIFIC AMERICAN, **218**:84-94, (Feb.) 1968.

* Sakulsky, S. B., Wallace, W. B., Silverstein, M. N., and Dockerty, M. B.: Ruptured spleen in infectious mononucleosis. ARCHIVES OF SURGERY, **94**:349-352, (Mar.) 1967.

the massive bleeding into the peritoneal cavity. So I think it happened on his last day.

Now just when that other thing happened, I don't know. He did have an infarct that we must account for, and he had much more of a myocardial infarct than many people do who experience quite a lot of pain. His original pain could have been accounted for by splenic bleeding. That is conceivable, and if so, it was obscured by the massive lesion that was present at the time of autopsy.

Dr. Paul T. Davidson, Resident, Internal Medicine: Prior to death, the patient received vigorous external cardiac massage. Would that have had any relationship to the rupture of his spleen?

Dr. Warner: Do you mean to ask whether the belly full of blood and the torn subcapsular hematoma have been the result of the efforts at resuscitation? No, I think not. First of all, he had gross blood in the peritoneal cavity before he died, as was shown by peritoneal tap. At autopsy, necrotic splenic pulp, hemorrhagic splenic pulp and blood clot were continuous throughout that lesion. Consequently I don't think the splenic rupture could have been caused by cardiac massage.

SUMMARY OF NECROPSY FINDINGS

1. Hemorrhagic infarction of the spleen, with rupture of the spleen
2. Hemoperitoneum
3. Recent myocardial infarction, left anterior wall, with obstruction of the left descending coronary artery; old myocardial infarct (six months to one year)
4. Bronchopneumonia, bilateral
5. Acute enterocolitis (gram-positive cocci and rods), patchy
6. Uremia (clinical)
7. Chronic passive congestion, liver
8. Multiple adenomas, small, kidneys
9. Prostatic hyperplasia with areas of infarction.

DR. THEILEN'S DIAGNOSIS

Dissecting aneurysm of the thoracic aorta.

STUDENTS' DIAGNOSES

1. Generalized atherosclerosis
2. Nephrosclerosis with azotemia
3. Myocardial infarction
4. Ruptured abdominal aortic aneurysm.

A New Trick Tried by Drug Addicts

Every medical practitioner is cautioned against complying with the request of a patient who presents a recipe, or what might appear to be a prescription from a doctor in another state, for the following formula, and wants the doctor to authorize an Iowa pharmacist to compound it:

Olive Oil	3 iv
Tr. Opium (Laudanum)	3 iv
Phenol	minims 20
Chloroform	minims 20

Sig: Apply locally for hemorrhoids

In that mixture there is a physical-chemicial incompatibility which permits almost total recovery, with relative technical simplicity, of the tincture of opium. One hundred milliliters of the laudanum represents between 60 and 65 15 mg. doses of morphine. In those cases which have been reported, the patient is knowledgeable and is careful in giving his true name and address to the prescribing medical practitioner.

The Iowa Uniform Narcotic Law states that a medical practitioner may prescribe, dispense or administer narcotic medications only to a *bona fide* patient, viz.

"Section 151.392 [Federal Regulation No. 5] Purpose of issue.—A prescription, in order to be effective in legalizing the possession of unstamped narcotic drugs and eliminating the necessity for use of order forms, must be issued for legitimate medical purposes. The responsibility for the proper prescribing and dispensing of narcotic drugs is upon the practitioner, but a corresponding liability rests witht the druggist who fills the prescription. An order purporting to be a prescription issued to an addict or habitual user of narcotics, not in the course of professional treatment but for the purpose of providing the user with narcotics sufficient to keep him comfortable by maintaining his customary use, is not a prescription within the meaning and intent of the act; and the person filling such an order, as well as the person issuing it, may be charged with violation of the law."

Narcotic Division
Iowa Board of Pharmacy Examiners

Attend the Annual Meeting
of the
AMERICAN MEDICAL ASSOCIATION
San Francisco, June 16-20
See Complete Program in the May 6 *JAMA*



Editorials

A FISH STORY

Now that summer is here, colleagues who are ardent disciples of Isaac Walton will be returning from trips to the lakes and streams with tall tales of their successes. A natural fish tale is deserving of their consideration, and it may inspire them to even taller tales of their own prowess.

The following is a *true* fish tale related by a naturalist. It is the epic story of a male silver salmon born and reared in the Humboldt County Prairie Creek Hatchery, in northern California. When still not much larger than a fingerling, he along with others was selected to be sent to sea. All were premanently identified by removal of their adipose fins. Released to the vast reaches of the Pacific, salmon mature and then, as you may have read, are said to return to and ascend the precise rivers where they, respectively, were born and raised in order to spawn.

Two years after the release of the school of young salmon to the Ocean, a hatchery worker was surprised to see a mature 14-inch salmon swimming in a holding tank with a school of 11-month-old fingerlings. How the mature male salmon, marked by the absence of adipose fins, had entered the tank was a mystery.

The only possible means of entry was a pipe that drains the holding tank. Workers then removed the cover of the flume leading to the pool, and to their amazement found 72 other salmon, all with adipose fins missing. All were of the same size and all were swimming energetically, but only one had made the last vertical leap to gain entry to the tank.

Search revealed the incredible story of their course from the sea. Swimming inland, they had traveled two creeks, then traversed a stream of waste, passed through a culvert under a highway, and into a square-yard storm sewer, jumped a foot-wide culvert, and swam some 80 feet to the flume that originated in the hatchery where they had been born.

Even more incredible had been the accomplishment of the salmon found in the pool itself. There are five pipes, each four inches in diameter, draining into the flume, but only one of them was from the holding pool. Choosing the proper drain, and following a circuitous course including a 90° turn and a vertical standpipe 54 inches high surmounted by a wire cap, the fish had had to make that final mighty leap and dislodge the netting in order to reach his objective.

The two-year-old males were stripped of milt, the spawn were fertilized, and their progeny now inhabit the pool where their parents were born.

Do your fisherman friends have taller tales to tell, or successes accomplished against greater odds?

TWO ARTICLES THAT YOU SHOULDN'T MISS READING

In this issue of the JOURNAL, physicians are urged, especially, to study the proposal for tuberculosis prophylaxis on pages 589 to 592. Tuberculin testing is advocated for all youngsters on entry into school and on reaching 14 years of age; routine tuberculin tests for all adult admissions to general hospitals and for all members of senior citizens' groups are recommended on an experimental basis; and isoniazid prophylaxis is suggested for everyone seriously at risk. Every physician who engages in patient care is asked to participate in this program.

The report on measles elimination in Polk County (pages 592 to 596) makes a point that too few of us have accepted—that immunizations of individual patients in their respective physicians' offices, though highly desirable for various reasons, simply do not finish the job that must be done if measles is to go the way of smallpox, diphtheria and poliomyelitis!

DEATHS FROM ASTHMA

It is estimated that there are approximately 4,500,000 persons in the United States afflicted with asthma, and that approximately 5,000 deaths associated with that disease occur here annually. The majority of deaths in such patients are said to occur when they are in status asthmaticus, a condition which has been defined as a no-longer-intermittent asthma, which is refractory to bronchodilator drugs, particularly epinephrine, for more than 12 to 24 hours. Despite the benefits of modern therapy, deaths from asthma are reported to be increasing, particularly in England, and there is an intimation that the use or misue of certain new therapeutic measures may be responsible for that rising death rate. A familiarity with the recent literature may be helpful to the physician in managing patients with this disease.

A group at the University Department of Medicine, Royal Infirmary, Edinburgh, reported finding that the administration of Adrenalin to chronic, wheezy asthmatics[1] relieved their airway obstruction, but failed to improve their hypoxemia. The same group, in a study of the effects of aminophylline[2] reported results comparable to those found in patients treated with Adrenalin—relief of airway obstruction, but an unpredictable effect on arterial oxygen tension (pO_2).

Other studies had demonstrated similar results from the use of Isuprel. An Aberdeen group[3] emphasized that although bronchodilators may afford symptomatic relief, the hypoxemia is not improved and the patient continues to need oxygen therapy. This appears to be true of the sympathomimetic adrenergic drugs, which act on the beta (inhibitory) receptors in the smooth muscle of the bronchioles to cause relaxation of the muscle and bronchodilatation, as well as of aminophylline, which acts directly upon the smooth muscle to improve the airway.

Palmer and Diament, in a study of 20 patients, found that by the use of aerosol isoprenaline (isoproterenol or Isuprel) there was a reduction of airway resistance and symptomatic relief of dyspnea. However that therapy, too, failed to bring about an improvement in arterial oxygenation (pO_2), and in many instances the degree of hypoxemia was actually made worse. With this method of treatment it was found that there was a significant reduction of pCO_2 levels suggesting an improved alveolar ventilation following use of the drug. The authors interpreted it as an indication that any increased ventilation must be going to alveoli already overventilated in relation to the blood flow, and that isoprenaline, though relieving bronchial obstruction, intensifies the ventilation/perfusion disturbance in the lung, and does not improve the gas exchange.

In another study the same authors found that in 41 patients with status asthmaticus, despite severe obstructive and ventilatory impairment, the extent of hypoxemia correlated better with the degree of restrictive impairment than with that of airway obstruction.[4] Thus it appeared that the decrease of lung compliance as a result of hyperinflation in the chronic asthmatic was a more important factor than obstruction to the bronchial air flow in the production of hypoxemia.

Of unusual interest to the clinician is a report from King's College Hospital, London,[5] on a series of 170 patients suffering from severe bronchial asthma treated with long-term steroids. They were first admitted to the Hospital during the decade 1952 to 1962, and the periods of observation varied from two to 13 years. The results were good in approximately 60 per cent of the patients; moderate improvement occurred in 26 per cent; failure took place in 9 per cent; and there were 10 deaths during the follow-up period. Eight of the deaths occurred in status asthmaticus—three of them within six months following discontinuance of the drug. The duration of therapy varied from six months to nine years. Withdrawal of therapy was successful in only 29 patients, and it is emphasized that asthmatic patients are particularly at risk after

1. Rees, H. A., Millar, J. S., and Donald, K. W.: Adrenaline in bronchial asthma. LANCET, 2:1164-1167, (Dec. 2) 1967.
2. Rees, H. A., Borthwick, R. C., Millar, J. S., and Donald, K. W.: Aminophylline in bronchial asthma. LANCET, 2:1167-1169, (Dec. 2) 1967.
3. Palmer, K. N. V., and Diament, M. L.: Effect of aerosol isoprenaline on blood-gas tensions in severe bronchial asthma. LANCET, 2:1232-1233, (Dec. 9) 1967.
4. Palmer, K. N. V., and Diament, M. L.: Hypoxemia in bronchial asthma. LANCET, 1:318-319, (Feb. 17) 1968.
5. Maunsell, K., Bruce Pearson, R. S., and Livingstone, J. L.: Long-term corticosteroid treatment of asthma. BRITISH M. J., 1:661-665, (Mar. 16) 1968.

withdrawal of steroids that have been given them regularly for more than a few weeks. Side effects occurred in 20 per cent of the group, and they were related more to the size of the dose than to the duration of treatment. There was no evidence that steroid therapy lost its effect with the passage of time. It was emphasized that though steroids reduce the number of attacks of status asthmaticus, they in no way alter the need for urgent treatment in the event of an acute attack.

A particularly disconcerting report by a group of London physicians tells of a progressive annual increase in the number of deaths from asthma in England and Wales since 1960.[6] Though there was an increase at each age level, it was most pronounced in adolescents and young adults. Between 1959 and 1966 the death rate from asthma increased three times in the 5- to 34-year age group, and nearly eight times at ages 10 to 14 years. No comparable increase has been observed in any other country, though smaller increases have been noted elsewhere in western Europe and in this country.

The authors said that no evidence could be found to suggest any change in diagnostic methods or in classification for death certificates, and they concluded that the increase was indeed real. Data procured from general practitioners provided no evidence of an increase in the prevalence of asthma, so it was deduced that there was a true increase in case fatality. In the absence of any demonstrable environmental hazards that could increase the severity of the disease, they speculated that perhaps new methods of treatment might be responsible.

In their efforts to establish a cause for the surprising increase in mortality, the same London physicians conducted an inquiry into the circumstances of deaths from asthma in the 5- to 34-year age group which occurred in England and Wales during the period from October 1, 1966, to March 31, 1967.[7] Information was procured from practitioners who cared for the deceased patients, and from the involved hospital physicians, pathologists and coroners. A special effort was made to elicit information concerning the therapy employed during the terminal illness in each instance, and whether the illness had been of such severity that death was anticipated.

During the six-month period under study, there were 184 deaths from asthma in persons between 5 and 34 years of age, certified to the registrar general. Information on 177 (96 per cent) of them was obtained, and the results of autopsies were obtained in 113 of the cases. From the inquiry, it appeared that death had occurred in patients with mild to moderate asthma since childhood, and that they had not been severe respiratory cripples. The mean duration of disease was 13 years, and the average age at onset was 7 years. Only 59 per cent of the group had ever been admitted to the hospital, but 81 per cent had consulted chest physicians at some time. Death had been reported as sudden and unexpected in 80 per cent of the cases, and in 39 per cent the practitioner involved had not regarded the terminal illness as a severe one. The fact that 59 per cent (109 out of 184) of the deaths were certified by coroners appears to confirm that death had often been sudden and unexpected.

The findings at autopsy were those characteristic of asthma—voluminous, over-distended lungs, and thick, tenacious mucus plugging the smaller bronchi. In 47 per cent of the 103 cases in which data had been recorded, the heart showed either right ventricular hypertrophy or dilatation. Atrophy of the adrenals was noted in six of 58 postmortem reports, and in all of those the patients had been taking corticosteroids.

Initially, a suspicion was entertained that the increased mortality could be attributed to the administration of corticosteroids. The authors said that adrenal suppression may have contributed to death in a few patients, but 34 per cent of those who died had never received steroids, and also the increase in mortality had not begun to appear until almost 10 years after the introduction of corticosteroids for the treatment of asthma. The detailed information on 173 deaths led to the conclusion that although two-thirds of the patients had been given corticosteroids at some time during the course of their disease, there was nothing to suggest that

6. Speizer, F. E., Doll, R., and Heaf, P.: Observations on recent increase in mortality from asthma. BRITISH M. J., 1:335-339, (Feb. 10) 1968.

7. Speizer, F. E., Doll, R., Heaf, P., and Strang, L. B.: Investigation into use of drugs preceding death from asthma. BRITISH M. J., 1:339-343, (Feb. 10) 1968.

they had been used to excess, or that they could have been responsible for any large proportion of the deaths.

Surprisingly, in response to an inquiry concerning drugs other than steroids used during the last month of the patient's life, 130 physicians mentioned aerosol preparations of bronchodilators. Further inquiry established that 86 per cent (150 out of 174) had used the inhalant preparations, but specific information was not procured concerning the time of their use in relation to the patient's death.

The authors pointed out that there had been a rapid increase in the use of aerosol preparations containing sympathomimetics since 1960, and there was a close correlation between that rise and the increased mortality from asthma in Britain. The fact that this method of treatment had been employed in 84 per cent of the patients would also appear to implicate pressurized bronchodilators in the rapid rise in mortality. Isoprenaline was the drug used in 72 per cent of the aerosol preparations. Reports from practitioners also indicated that there had been an excessive use of pressurized aerosols by some patients, varying from a vague implication to a detailed account of overuse.

That aerosol bronchodilators could affect the patient adversely was emphasized by the London group. An excessive amount of a sympathomimetic drug, absorbed from the bronchi over a long period, could result in a serious or fatal ventricular arrhythmia. Also the reduction in bronchial obstruction without a corresponding improvement in arterial oxygen tension may mask respiratory insufficiency and delay proper treatment. In their concluding paragraph they stated that specific inquiries were not made concerning the use of aerosol immediately preceding death, so that further evidence is required before the effect can be assessed accurately.

The 1967 edition of NEW DRUGS says, regarding bronchodilator drugs: "Untoward reactions associated with the adrenergic bronchodilators consist primarily of cardiovascular or central-nervous-system effects that occur from overdosage or in patients who are sensitive to these drugs.

"Palpitation, tachycardia and other irregularities in cardiac rhythm occur most commonly when isoproterenol is given by inhalation, or large doses of epinephrine are given parenterally."

In the same discussion it is pointed out that the absorption of aminophylline from rectal suppositories is variable, and deaths have been reported from the use of aminophylline suppositories in asthmatic children. Also the administration of aminophylline by means of aerosols or insufflated powders is not recommended because local irritation of the respiratory tract and bronchospasm may ensue. Also, the too-rapid intravenous administration of aminophylline has led to severe and even fatal cardiovascular reactions.

Obviously the clinician must recognize that therapeutic agents in the management of the asthmatic patient can have serious adverse effects, and that aerosol preparations of bronchodilators must be suspect. It should also be kept in mind that even though the patient may be relieved of airway obstruction, that the beneficial effect may mask a persisting hypoxemia and ventilatory failure. If bronchodilators are prescribed, the patient should be instructed concerning the hazards of their overuse.

OBESITY

A report from the diabetic and dietetic department at the Royal Infirmary of Edinburgh on a follow-up study of refractory obesity treated by fasting confirms the difficulty of managing the obese patient and indicates that the results of that form of treatment are discouraging.*

The group under study consisted of 21 women and four men with an average age of just over 42 years. All were clinically obese, they were overweight by at least 42 per cent as compared with their respective norms, and they fulfilled the criteria for refractory obesity. They had attended the dietetic clinic regularly, but their weight had either increased or remained unchanged during the six-month period prior to hospitalization for fasting therapy—this despite prescribed diets and the use of

* MacCuish, A. C., Munro, J. F., and Duncan, L. J. P.: Follow-up study of refractory obesity treated by fasting. BRITISH M. J., 1:91-92, (Jan. 13) 1968.

anorexic drugs in nine patients. Appropriate studies demonstrated that all patients were free of endocrine disease and that none was in cardiac failure. Several had complications of obesity such as varicose veins, hernia and osteoarthritis.

Upon admission to the hospital, the patients were given a 400-500 calorie diet for one or two days. During the fasting period they were permitted to drink as much water, tea or coffee, or a caloric fruit juice, as they desired, but no solid food was permitted them. A multivitamin tablet was given daily, and mineral supplements, hypnotics or sedatives were prescribed as necessary. Each patient was urged to be ambulant, and weights were measured every second day. Electrolyte studies and tests for ketosis were made regularly, but there were no serious metabolic disturbances that necessitated termination of the fasting. For a few days before leaving the hospital, the patients were given a daily diet of 400 calories, and upon discharge they were given detailed instructions and a diet of 400 to 1,000 calories.

Following discharge, patients reported to the outpatient department at intervals of four weeks or less, and were weighed, interviewed, given further dietary advice, and offered every form of encouragement possible. Twenty-two of the group were given an anorexic agent at some time during the follow-up period. The mean duration of the follow-up was 14 months, but only 13 patients continued attending the clinic. The others defaulted.

In the group of 25 patients, two defaulted from the program immediately after being admitted to the hospital. Among the 23 patients who continued the fasting period for an average of 25 days, the mean loss of weight was 26.7 lbs., from a mean of 278.3 to 251.6 lbs. Following discharge from the hospitals and during the mean follow-up period of just over 14 months, all of the group gained weight, the mean gain being 28.5 lbs. Equally discouraging was the fact that only 13 of the patients continued attending the clinic.

In discussing their experience and other reported series, the Edinburgh authors pointed out that many obese patients referred to a weight-reduction clinic fail to return. A variable number of those who continue coming to the clinic succeed in losing weight, but the remainder stay overweight or actually increase in weight. For some of those who achieve a measure of success, the loss of weight may be attributable to anorexic agents and unusual dietary measures, but their efforts are almost always temporary.

The Edinburgh physicians say that the reports of studies on patients whom other researchers hospitalized and subjected to starvation should be interpreted cautiously. They are convinced that those other men have been mistaken in thinking the technic relatively effective as a long-term measure.

They point out that the patients in their study lost weight while fasting in the hospital, but that most of them regained all of it within a few months after returning home. Among 15 of the group who were followed in the outpatient clinic for at least a year, only four, when last seen, weighed less than they had before fasting. Almost half of the fasted patients sooner or later defaulted from follow-up. Though all patients lost an appreciable amount during the period of fasting, they were still considerably overweight when they left the hospital.

The authors say that perhaps obese patients might derive greater long-term benefit from a relatively short period of fasting if it were started soon after referral to a weight-reduction clinic, and before their obesity became refractory. On the other hand, if patients with established and refractory obesity fasted for a much longer period, until they had reduced to within 10 per cent of their respective standard weights, they might be better satisfied with the results of their efforts, and thus would have a greater incentive to keep their weight under control. If the latter approach gave improved long-term results, the expense of the program and the prolonged occupancy of much-needed hospital beds might be justified.

In conclusion, they assert that from their experience, "the extremely disappointing long-term effects of a relatively short period of fasting in patients with substantial and refractory obesity indicates that such treatment should be offered only to those who immediately require to lose weight, if only temporarily, because of some additional medical reason such as increasing dyspnea, cardiac failure or a need for important elective surgery."

SMOKING AND HEALTH

The October 28, 1967, issue of LANCET quotes Sir George Godber, chief medical officer of the British Ministry of Health, on the subject of cigarette smoking. His remarks should be helpful to the practicing physician in convincing his patients of the wisdom of stopping the pernicious habit of cigarette smoking.

According to Sir George, no rational man faced with the evidence would go on indulging a habit unless it had some compulsive effect upon him. He is of the opinion that as a result of the anti-smoking campaign the British public now recognizes an association between cigarette smoking and lung cancer, but that the individual does not recognize the immediacy of that association for himself.

The British authority stated that in Britain today, two out of every three men and two out of five women are cigarette smokers, and the average male smoker buys about 130 cigarettes per week. On the other hand, among physicians in England, exclusive of medical students, only one in four smokes cigarettes only and regularly. He made the dramatic statement that the death rate for lung cancer among male doctors has fallen to two-fifths of the national rate.

Sir George also expressed the opinion that although there have been hopeful signs suggesting a decrease in smoking among the young, the figures indicate only a marginal improvement. Whereas campaigns aimed at preventing the young from smoking have concentrated on the remote risk of death, stress should be placed upon the immediate effects. Youths should know that the damage starts now. The assertion was made that "the abolition of cigarette smoking might reduce the death rate by 10 per cent, and that no other exercise in preventive medicine could do so much."

A recent report in the WALL STREET JOURNAL quotes Daniel Horn, director of the National Clearing House of Smoking and Health, as saying that recent data constituted "an enthusiastic sign that finally we're beginning to make progress in the war against cigarette smoking." It was estimated that there are about 1.5 million fewer cigarette smokers than a year ago, despite an increase of about 3 million in the population. A recent survey also suggested that the proportion of smokers among teen-agers has declined significantly from levels reported in numerous other studies during the past 10 years.

In commenting on the findings reported by Dr. Horn, the special consultant for the American Cancer Society, Dr. Harold Diehl, stated that it was the most heartening news that has come to his organization in its campaign to reduce cigarette smoking. He said, "Here is positive proof of the good judgment of the American people and their responsiveness to hard facts when openly presented."

One cannot escape the conclusion that it is the individual physician who, by precept and example, can exert the greatest influence on his patient to stop smoking. The evidence linking cigarette smoking and disease appears incontrovertible, even though the precise mechanism is not fully understood.

THE NEED FOR REPEATED DRILLS IN THE MANAGEMENT OF MASS CASUALTIES

A report on exercise in the management of a simulated disaster in Hartford, Connecticut, deserves the attention of physicians in every community in the land, and it should prompt responsible citizens to overcome irresponsible apathy and make adequate preparations to cope with disasters, both large and small.*

The exercise in Hartford was carried out in May, 1967, after six months of careful planning. It was initiated by the City Health Department and the Council of Hospitals of the City of Hartford. Numerous agencies participated in the program, including the Police and Fire Departments, Civil Defense, Red Cross, the county medical society and others concerned with the problem.

The simulated episode was a boiler explosion

* Menczer, L. F.: Hartford disaster exercise. NEW ENGLAND J. MED., 278:822-824, (Apr. 11) 1968.

in a building at Trinity College, presumably resulting in a fire and partial collapse of the structure. The "casualties" were 56 male students and eight women, all litter patients, who were removed from the three floors of the building, were given emergency treatment, and were transported to hospitals where they were given definitive care.

Despite experience with a previous disaster, and despite careful planning and the active participation of the many agencies concerned, and even though the time, the location and the nature of the "disaster" had been known in advance, numerous deficiencies were observed and several major lessons were learned.

It was noted that there had been no recognized leader or overall authority at the scene of the disaster to integrate and coordinate the services of the various agencies. A medical authority was also lacking at the disaster scene to decide the priorities of cases for transportation to a hospital. There was a need for improved first-aid equipment and for a means of avoiding the confused and often interrupted handling of the victims. Inasmuch as the police and fire fighting personnel are the first to reach the scene of a disaster, they need to be given extensive first-aid courses. A greater effort should be made to coordinate the various ambulance services. Although the hospital care appeared to be adequate, there was a lack of effective triage, and there was inadequate follow-up of patients.

Although accredited hospitals are expected to maintain a disaster plan and to carry out simulated-disaster drills twice a year, it is generally recognized that most hospitals are not well prepared to cope with such an emergency. The real deficiency, however, appears to be a lack of communication and of coordination among the many agencies involved.

The explosion and fire in Keokuk and the tornado in Belmond must not be forgotten. Similar catastrophies can occur in any community. An editorial in the NEW ENGLAND JOURNAL OF MEDICINE concludes with the statement: "Disaster preparedness represents a broadly unmet need in which the medical profession's apathy is more evident than its exercise. The danger of unpreparedness is clear and present."

Individual physicians should concern themselves with plans for meeting a disaster in their communities and in the hospitals with which they are associated. A careful inquiry should be made to determine whether the plans are adequate, whether the specific responsibilities are clear and the personnel are qualified, and whether the lines of communication are set. Proper planning is necessary, whether the patients are victims of a single automobile accident or of a mass disaster.



Physicians present at the 1968 IMS Annual Banquet to receive letters indicative of their life memberships were (from left to right) W. R. Hornaday, Sr., M.D., Des Moines; M. J. McVay, M.D., Lake City; K. L. Thompson, M.D., Oakland; B. L. Knight, M.D., Cedar Rapids; H. G. Moershel, M.D., Homestead; R. G. Mellen, M.D., Clinton; and C. F. Watts, M.D., Marengo. The full list of new Life Members can be found on page 639 in this issue of the JOURNAL.

President's Page



In the past two decades, malpractice litigation has increasingly become an occupational hazard to the practicing physician. There are several reasons for this—

—The increasing erosion of the public image of the physician by the forces that would socialize our profession.

—The increasing tendency of the courts to accept the doctrine of *res ipsa loquitur* as it pertains to malpractice suits. (The physician and surgeon who is faced with an insurmountable medical problem may end up medically with an exceptional result, but functionally with a very poor one. If the doctrine of *res ipsa loquitur* applies, he is unduly exposed to possible litigation.)

—The increasing tendency of the public to look for the easy and fast dollar.

The rising rate of medical-legal litigation is reflected in the precipitant increase in the cost of malpractice insurance. This is a cost of operation for the practicing physician, and it must be passed to the consumer who, of course, is the patient, who has a great interest in the rising cost of medical care.

Any thinking physician recognizes that there are legitimate causes of action in the process of medical treatment, but this is true only in a minority of the suits filed.

It makes no difference, however, how phony the cause of action may be, if a suit is filed, a physician's name may be blared over radio and television for 24 to 48 hours in his community with the allegations—however unfair and unfounded they may be—and he has no recourse. When the suit comes to trial and is thrown out of court or is settled for an insignificant amount for nuisance value, that fact is not publicized.

There should be some means of separating the suits that have no legitimate medical foundation from those that do. One such means is the Medical-Legal Liaison Committee that can be established at least in each large county medical society. In such an instance, it should become the policy of the county society for every member to refer to the Medical-Legal Liaison Committee any inquiries that may come from an attorney regarding a possible medical-legal case. This Committee would meet, drafting members of the county society in the various specialties as might be deemed necessary, and the case could then be gone over very carefully and anonymously, and any questions the attorney might have would be answered. If a complaint is truly legitimate, a just settlement may well be obtained out of court. If it is not legitimate, the suit should and likely will be dropped.

In addition to this, every physician should think very carefully when a patient complains to him about some treatment that has been given to him previously by a colleague. Careless or unjustified comments or reactions at such a time may well trigger an unfounded claim or lawsuit.

C. W. Talbot, M.D.

President

MEDICAL HISTORY



An Exchange of Letters

The letters that follow were found in a review of old records. They are self-explanatory, and interesting. The names of patient, husband, and nephew have been changed.

D.F.C., Jr., M.D.

Des Moines, Ia.
June 25, 1914

The Doctors Mayo,
Rochester, Minn.

This will introduce Mrs. Hattie Minsley of Des Moines, who has been under my care for the past few months. After a careful observation of the case, the diagnosis was made of either an ulcer of the stomach or carcinoma of the pylorus. Operation was advised and patient submitted to an operation on Feb. 2, 1914. Operation performed by Dr. Wilton McCarthy of this city. Findings at operation were an old scar from an ulcer on outer and lower curvature of stomach with a diffuse carcinoma of posterior wall of stomach; some dilatation of stomach; gall-bladder and bile tract free; a posterior gastroenterostomy was done. Patient made a rather slow convalescence as she developed a phlebitis in left leg which kept her in bed for some time. She has continued to lose some weight and occasional profuse emesis. Any advice or treatment you see fit to give will be greatly appreciated.

Resp.
(signed) DANIEL F. CROWLEY

Rochester, Minn.
July 3d., 1914

Dr. Dan'l. F. Crowley,
No. 207 Flynn Block,
Des Moines, Ia.

My dear Dr. Crowley:—

Your letter of June 25th. received and contents noted. Mrs. Ted Minsley was here on the 26th. of last month and has been carefully examined. This afternoon she was seen in consultation by Dr. W. J. Mayo and he requested me to communicate with you, asking your opinions regarding her case. He feels that he does not care to operate upon this patient until he hears an expression of opinion from you, especially after the patient has been studied by yourself and Dr. McCarthy, whose ability is, of course, known to Dr. Mayo.

If you are willing to accept our judgment that an exploration may be indicated and if the patient concurs, Dr. Mayo will operate. In view of the findings after a gastric analysis and two x-ray examinations, taken in connection with the patient's history in the past few weeks, we are of the opinion that the patient might be benefitted by an exploration.

We request that you kindly communicate with us on this matter as soon as possibly convenient.

Yours very truly,
(signed) HAROLD L. FOSS, M.D.
Drs. Mayo, Graham, Plummer & Judd

Des Moines, Ia.
July 6, 1914

Dr. H. L. Foss,
Rochester, Minn.

Dear Doctor:—

Your letter of July 3, 1914 at hand and contents noted. (Reply delayed on account of being out of the city.)

In reply wish to say that it is barely possible that we were mistaken in the diagnosis, as no microscopic examination was made, though we did make gastric analysis and x-ray examination. If, however, it is the belief of yourself and Dr. Mayo that she will be benefited by an exploration and further surgical treatment, I wish you would proceed, and I believe the patient has gone to your hospital with this point in view.

I shall be interested to know the final decision and also the findings if exploration is made.

Fraternally yours,
(signed) DANIEL F. CROWLEY

Rochester, Minn.
July 14, 1914

Dr. D. F. Crowley,
Des Moines, Ia.

Dear Doctor:—

Mrs. Minsley was operated upon this morning. We resected the pyloric end of the stomach, which was found to be thickened and obstructed. The mucous membrane was enormously thickened, soft and oedematous, forming a soft obstructive mass. The gastroenterostomy opening had contracted somewhat and was adherent and this was freed from adhesions and enlarged. The appendix contained fecal concretions and was removed.

We shall keep you informed as to her progress. Thanking you for referring Mrs. Minsley to us, I remain,

Sincerely yours,
(signed) W. J. MAYO

The gastroenterostomy which you had made evidently had done much good.

Rochester, Minn.
July 28th., 1914.

Dr. D. F. Crowley,
Des Moines, Ia.

Dear Doctor:—

Mrs. Ted Minsley has done well following her operation of the 14th. She left the hospital yesterday and should return home in about ten days, at which time we shall be pleased to write you further.

Yours very truly,
Drs. Mayo, Graham, Plummer & Judd
(Signed) D. F. HALLENBECK, M.D.

Rochester, Minn.
Aug. 8th., 1914.

Dr. D. F. Crowley,
Des Moines, Ia.

Dear Doctor:—

Mrs. Minsley left for home last night.

Thanking you for your courtesy in referring this case to us and trusting Mrs. Minsley continues to do well, we remain,

Yours very truly,
Drs. Mayo, Graham, Plummer & Judd
(signed) D. F. HALLENBECK, M.D.

Des Moines, Ia.
Aug. 11, 1914.

Dr. Wm. J. Mayo,
Rochester, Minn.

Dear Doctor:—

I am pleased to know of Mrs. Ted Minsley's rapid convalescence. I am interested to know if you consider this case one of malignancy, and if so, what is the final prognosis.

Resp. yours,
(signed) DANIEL F. CROWLEY

Rochester, Minn.
Aug. 13, 1914.

Dr. Daniel F. Crowley,
208 Flynn Block,
Des Moines, Ia.

Dear Dr. Crowley:—

In response to your letter of the 11th:

We have not been able to find malignancy in the specimens removed from Mrs. Minsley, and I do not, therefore, see why the prognosis is not good.

Asking that you remember me kindly to her, I am,

Yours very truly,
(signed) W. J. MAYO

Des Moines, Iowa
Dec. 16, 1914

Dr. Will Mayo, Rochester, Minn.

Dear Sir:—

I am writing you in regard to my wife, Mrs. Ted Minlsey, whom you operated on July 14th for stomach trouble. She had been a patient here of Dr. Crowley, and when she came home from Rochester she was turned over to Dr. Joe Flannery. He called to see her a couple of times and then we called him again and could not get him for over a week. Then he said he had quit going from his office to practice.

She had been troubled with *gas on her stomach.* The Dr. said it would go away, but it has not done so but is continually getting worse until now she is getting so bad again that she is in bad shape again, and she is all bloated up, and stomach and bowels are hard as a rock. We have felt it would be of no use to call Flannery any more, so we thought it proper to write you for your opinion. She is complaining of her head aching considerable. She can hardly eat anything, without hurting her. Her right leg is also swollen and hurts all the time. She has been having alcohol baths since she has been home and has taken good care of herself.

If there is any doctor here you could recommend we would be glad to have him if it is your wish and if not I will send her to see you. Hoping this letter will reach you for your consideration, I will await your reply and oblige yours,

(signed) TED MINSLEY

Rochester, Minn.
Dec. 17th., 1914.

Mr. Ted Minsley
Pleasant View Drive, S.W.
Des Moines, Ia.

Dear Mr. Minsley:—

I am very sorry to know that your wife is not getting on as well as you think she ought, and would suggest that you have Dr. Crowley see her and write us his findings upon examination.

During the time that Mrs. Minsley was under our care, we kept Dr. Crowley informed as to her progress and what we were doing for her, so that he is entirely familiar with her case. When she left for home we wrote him, and expected that he would look after her further treatment. If we were wrong in this, please let me know, and I will try to advise with you further.

Please remember me kindly to your wife.

Very truly yours,
(signed) W. J. MAYO

Des Moines, Iowa
Jan. 5th., 1915

Doctors Mayo,
Rochester, Minn.

Gentlemen:—

This is just a line to ask your candid opinion as to my Aunt, Mrs. Theodore Minsley, who was up to Rochester last summer and was operated on by you after having been operated on here at Des Moines by Drs. McCarthy and Crowley, and to get your own personal opinion as to what is the cause of her illness and what can be done to relieve her, as she has never been well since she came home, and if there is anything serious, we would very much appreciate knowing it.

You referred her and my uncle, Mr. Minsley, to Dr. Flannery when they returned home, but Dr. Flannery will have nothing to do with the case as he was consulted by her previous to the first operation, and then she went to Dr. Crowley, who had been treating her before that time, and she won't go to Dr. Crowley, as you suggested in your last letter to her.

Now she has the gas on her stomach all the time and she is complaining all the time, she lays around most all the time and does not want to get up and do anything or get around on her feet, and last night she was kept awake all night with pains in her stomach caused, as she thinks, from the gas. Is it gas, or is it something else? I would like to know. Wasn't Dr. McCarthy right when he told her she had cancer, or was he not? I am asking for a candid answer, and what will you suggest doing to help her, or is there no help for her.

Did she need an operation at all, hasn't she just got the change in life, the same as every woman goes through, only some have it worse than others? She acts just like a lady we knew some time ago, and she was having the change and she finally died from it.

Also if she has no cancer, would you be willing to make affidavit in case she would sue Dr. McCarthy and Dr. Crowley for the opening being in the wrong place.

Will ask that you advise me fully as to the above questions, and will thank you for your early attention to these matters, as it is over a year now since she started this illness, and we would like to have something done if it is possible, and if it is not, would like to know it, as she is spending money every day going from doctor to doctor.

Awaiting your reply with interest, I am,

Yours very truly,
(Signed) A. R. WILLSAM

P. S. Enclosed please find stamped envelope for reply.

Rochester, Minn
January 8th., 1915.

Mr. A. R. Willsam
Des Moines, Iowa

Dear Sir:—

Your letter of the 5th. regarding your aunt, Mrs. Minsley, is received. When I operated on her, July 14th. 1914, I found a tumor mass in the pyloric end of the stomach in the location that Dr. McCarthy and Dr. Crowley told you about. This mass I removed. It did not prove to be cancer, but was very suspicious.

I expected that she would get quite well, and am very sorry to hear that she is not. If she is able, I wish she would come up and let us examine her again to see if we can locate the cause of this present trouble.

There are no grounds of complaint against Dr. McCarthy and Dr. Crowley in any way that I can see.

Yours very truly,
(signed) W. J. MAYO

(On January 31, 1916, notices of malpractice suits by Theodore Minsley and Mrs. Hattie Minsley were served against Dr. Wilton McCarthy and Dr. D. F. Crowley.)

The following letter is addressed to Dr. D. S. Fairchild of Clinton, and to Mr. Dutcher of Iowa City. Dr. Fairchild was chairman of the Committee on Medical Defense of the Iowa State Medical Society, and Mr. C. M. Dutcher was legal counsel for the State Medical Society.

Des Moines, Iowa.
February 4, 1916.

Dr. D. S. Fairchild,
Clinton, Iowa.

Mr. Dutcher,
Iowa City, Iowa.

Dear Sir:

This letter is to inform you that notice of suit has been served on Dr. Wilton McCarthy and myself by one Mrs. Hattie Minsley and her husband Ted, for alleged negligence in diagnosis and diverse other errors in treatment of the case.

I wish to state briefly the history of the case since it has been under my observation:

During the fall of 1913, Mrs. Minsley called upon me for treatment of trouble with her stomach, giving a history of loss of weight, emaciation and various other symptoms of obstruction to the pylorous. After observing case for a short time I advised that she submit to an operation for relief of her trouble. They readily consented and requested that the operation be performed by Dr. McCarthy. Patient went to hospital on January 27, 1914. Operation was performed February 2, 1914. It was determined at operation that there was a large obstruct growth at pylorous. The stomach wall and membrane were greatly thickened and oedematous. It was thought advisable at the time, on account of her weakened condition, not to do a resection of the pylorous and a gastroenterostomy was made.

Patient made the usual recovery following an operation of this kind. Patient and her family were told the growth was the cause of trouble and it may be malignant and that she may possibly have a recurrence of her symptoms. This did take place as her symptoms returned in the course of a month or six weeks. Following this, I advised that they go to Rochester, Minn., for further treatment with the Mayo Bros. She consented and went to Rochester and Dr. Will Mayo performed operation, found the same conditions present and made a resection of the pylorous.

In a personal letter from Will Mayo, he tells me the obstruction was due to this growth and the thickening wall and oedematous membrane of the stomach. The opening made by Dr. McCarthy had slightly contracted due to some adhesions. The adhesions he broke up and simply enlarged the opening made by Dr. McCarthy, leaving the anastomosis as it was primarily.

In a second letter from Dr. Will Mayo he states that their pathologist was unable to find any malignant cells. I know nothing of the history of the case since her return from Rochester.

Notice was served on Dr. McCarthy and myself January 31st to come up in the March term of the district court.

You will greatly oblige both Dr. McCarthy and myself by giving the matter your immediate attention. Any further information you may deem necessary will be gladly given.

Yours very truly,
(signed) DANIEL F. CROWLEY

Clinton, Iowa.
Feb. 5, 1916.

Dr. Daniel F. Crowley,
Des Moines, Iowa.

Dear Doctor:—

I received the statement made by Dr. McCarthy to Mr. Dutcher, yesterday, and wrote Dr. McCarthy that we would instruct Mr. Dutcher to take the necessary steps for your protection, and have written Mr. Dutcher that it was one of the cases that could not for a moment be compromised, on the ground that if cases of this kind were not fought to the end, there would be no safety in the practice of medicine or surgery. Of course you did not contract to cure this woman, only to exercise reasonable care and skill in the diagnosis and treatment of the case.

If you have any witnesses that overheard any conversation between you and Dr. McCarthy and this woman in regard to another operation probably being necessary, it would be well to look them up. However, Mr. Dutcher will advise you as to this.

We have only to request that you will not employ any attorneys on the part of the State Society except such as may be advised by Mr. Dutcher.

Yours truly,
(signed) D. S. FAIRCHILD

Iowa City, Iowa
February 5, 1916

Dr. Daniel F. Crowley,
208 Flynn Bldg.,
Des Moines, Iowa.

Dear Doctor:

We are in receipt of your favor of the 4th inst. advising us of the suit by Mrs. Minsley and also one by her husband against you and Dr. McCarthy. We are also in receipt of a letter from Dr. Fairchild advising us that you and Dr. McCarthy are entitled to the defense of the Society and we will give the matter all needed attention.

As you doubtless understand, this case is brought for the March term, and the petition is not yet on file. We will not know the particulars of the plaintiff's claims until we see the petitions. We will attend to securing a copy of them and will communicate with you thereafter. We will give the cases all needed attention, and will see you personally about it the next time Mr. Dutcher is in Des Moines. You doubtless understand, of

course, that the case will not be tried at the March term, and that in all probability it will not be tried until next fall.

Yours very truly,
DUTCHER, DAVIS HAMBRECHT

(On February 11, 1916, petitions charging malpractice against Dr. Wilton McCarthy and Dr. D. F. Crowley were filed in the office of the Clerk of the District Court in Polk County by Mrs. Hattie Minsley and Theodore Minsley.)

Rochester, Minn.
May 15th., 1916.

Dr. Daniel F. Crowley,
500-501 Fleming Bldg.,
Des Moines, Ia.

Dear Dr. Crowley:—

I have your letter of the 13th. So far as I can see, these people certainly have no case of any kind. It was not until we had examined the specimen microscopically that we were convinced that the condition was not cancerous, and I don't know how any one else could arrive at any conclusion beyond what you did.

I enclose herewith copies of your letters to us regarding Mrs. Minsley, and our replies. You will, of course, keep their communications confidential.

Yours very truly,
(signed) W. J. MAYO

Rochester, Minn.
Nov. 30, 1916

Dear McCarthy

Mrs. Minsley and her atty were in to see me yesterday.

I told them that our opinion coincided with yours in every respect and that the suit was all nonsense. I do not think you will hear of it again.

Sincerely
(signed) W. J. MAYO

(On June 27, 1917, the charges brought by Mr. and Mrs. Minsley in District Court against Dr. Wilton McCarthy and Dr. D. F. Crowley were dismissed without trial, plaintiffs to pay costs.)

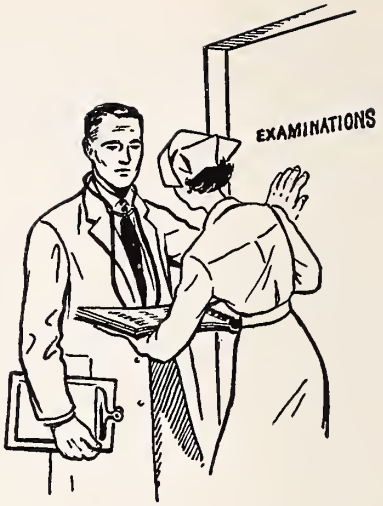
Regents Approve $17.5 Million U. of I. Hospital Project

Project plans and the preliminary budget for a $17,550,000 addition to the University of Iowa's General Hospital were approved May 10 by the State Board of Regents. The addition, to be located south of the General Hospital in Iowa City, will be financed with a combination of revenue bonds, Hospital funds, and federal funds. No state tax funds will be used on the project. Construction funds will include $11 million in revenue bonds, $1.55 million from the Hospital Building Fund, and $5 million from federal sources. An act passed by the Sixty-Second Iowa's General Assembly in 1967 allows University Hospitals to issue revenue bonds to finance long-range capital improvements. The bonds will be retired from earnings of the Hospitals.

The proposed eight-story structure of 466,000 gross square feet will be constructed to permit future vertical expansion. It will house an operating room suite, a diagnostic radiology unit, outpatient clinics, and inpatient facilities with 400 beds. University officials told the Board that the need for the new facilities has been well documented in detailed studies done by University Hospitals' administrators and by impartial health agency investigators who have surveyed the present physical plant. The University's General Hospital, built 40 years ago, and the Children's Hospital, in service for half a century, are inadequate to meet present and future demands for statewide medical and teaching services. Outlining the proposed usage of the new structure, they said that operating room facilities, now located in several different areas at the Hospitals, will be brought into a central location which will improve economy, efficiency, and patient care. Some 15,000 operations—more than 285 per week—are done annually. The building will also provide much needed new space for diagnostic radiology, one of the most important fields in modern medicine. More than 100,000 radiological procedures are now done annually at the Hospitals.

University officials noted that the Hospitals' outpatient clinics, now coping with nearly one-quarter million patient visits yearly, play an important role in the Hospitals' service and education programs. These clinics are now located in widely separated areas of the Hospitals, and bringing the clinic specialists together in the new building will greatly facilitate consultation, examination, and patient referral. The new structure also will include 400 private and semi-private rooms for inpatients, of whom more than 30,000 are admitted annually.

THE DOCTOR'S BUSINESS



Partnership and Associate Arrangements

LARRY E. LEAVERTON
Des Moines

With the increase in utilization of medical services, many solo physicians are looking for associates to join them, and many existing partnerships are looking for additional physicians.

Although partnership and group practice is becoming increasingly popular, it is not necessarily right for each individual. If a doctor is independent, possesses a difficult personality, or wants to run things himself, he will be happier in solo practice. The larger the group, the less voice he will have in the management. In general, any relief that a busy solo practitioner achieves by adding one associate is short lived. He and his partners soon have two busy practices, with the same pressures. Some coverage is possible for vacations, meetings and postgraduate study, but complete coverage of the new two-man practice is difficult. At that point, many partnerships will expand to three men in order that two men are always available. Many physicians consider a three-man partnership to be an ideal size.

HOW TO SEEK AN ASSOCIATE

In searching for an associate, all possible sources should be pursued. Consult the AMA and State Medical Society placement bureaus, teaching hospitals, department heads at the U. of I. College of Medicine and other physicians. Local hospitals are a good source, for an intern or resident will frequently locate in the area where he receives his training. When a prospect is interested, do everything you can to persuade him to join you, for the good men have many other offers to consider.

FINANCIAL ARRANGEMENTS WITH NEW ASSOCIATES

We are frequently asked, "How much salary and what starting arrangements are customary for a new associate?" There are no pat answers to these questions. There are guidelines and precedents in most communities however. Substantial changes have taken place in the past few years. Starting arrangements are becoming more liberal. The law of supply and demand is very much in effect, particularly in some localities and in some specialties. The physicians coming out of internship, residencies and military service are not so deeply impressed as in past years with the difficulties of starting a medical practice.

It is still preferable to start a new associate on a salary arrangement for the first year. During that period the two doctors have an opportunity to get well acquainted and to know, at the end of the period, whether they want to form a permanent arrangement. You will also have a better idea of the productive capacity of the junior man. The arrangements should be businesslike to prevent any misunderstandings, with the provisions reduced to writing by your attorney, and periodically reviewed so that they may be sure to meet current conditions. The methods adopted for dividing income after the partnership has been formed must be tailored to the individual situation. An arrangement pointing toward an equal percentage over a period of years is simplest if the physicians' productive capacities are similar. If there is a difference, a percentage based on production should be considered, or, as a compromise, a combination of the two.

A word of advice to doctors adding new associates would be to keep the arrangements as simple as possible. We have seen complicated formulas used in purchasing capital assets and accounts receivable, and in dividing income, where a far simpler method would have worked better. For example a substantial fee was paid to an appraisal company, in one instance, to evaluate the equipment and supply inventory prior to the adding of an associate. This caused bickering and bargaining over the price of a desk, instruments, etc. The partners then set an arbitrary percentage for the new associate's share of the earnings that could miss his actual contribution to the partnership by many thousands of dollars. In another instance, accounts

(Continued on page 646)

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

MODERN TREATMENT, VOL. 5, NO. 1, TREATMENT OF CONGENITAL HEMORRHAGIC DISORDERS, Guest Editor, *Oscar D. Ratnoff*, M.D., and TREATMENT OF DISORDERS OF GROWTH AND DEVELOPMENT, Guest Editor, *Roberto F. Escamilla*, M.D. (New York, Harper & Row Publishers, 1968. $16.00 per year).

PRACTICAL AUTOMATION FOR THE CLINICAL LABORATORY by *Wilma L. White*, B.A., *Marilyn M. Erickson*, B.S., and *Sue C. Stevens*, B.A., M.A., Ph.D. (St. Louis, C. V. Mosby Company, 1968, $14.50).

INFECTIOUS DISEASES OF CHILDREN, FOURTH EDITION, by *Saul Krugman*, M.D. and *Robert Ward*, M.D. (St. Louis, C. V. Mosby Company, 1968, $16.50).

BOOK REVIEWS

DRUGS OF CHOICE: 1968-1969, ed. by *Walter Modell* (St. Louis, C. V. Mosby Company, 1967).

The sixth edition of this compendium, published every two years, is necessary because of the increasingly rapid introduction of new drugs in the past 10 years, plus the increasing awareness by the public, the FDA, and physicians regarding side effects which may occur following their use. It is a compilation of the thoughts of many experts and educators in medicine. Chapters are devoted to general subjects such as "Principles for the Choice of Drugs," and "Adverse Drug Reactions" and "Alternative Drugs of Choice." Specific areas such as "The Choice of Antibacterial Agents," "Drugs for Cancer and Allied Disease" and "Drugs for Urologic Disorders" are included. In the back is a Drug Index, which lists drugs under both generic and trade names, and provides administration and dosage forms.

Dr. Modell has edited this book with compassion for the physician who is often confused by the FDA's restrictive edicts, on the one hand, and the glowing enthusiasm of the drug manufacturer, on the other. Each chapter is written in a rather succinct form, with generalizations to guide us as to mechanisms of action of certain classes of drugs, possible warning signs of impending trouble, rational bases for indications of certain classes of drugs, and discussions of specific drugs for us to chose from. It differs from CURRENT THERAPY by dealing more in generalities and fundamental bases for therapy, and it offers more data on more drugs than does CURRENT THERAPY. On the other hand, CURRENT THERAPY gives a certain authority's treatment schedule or alternative treatment methods. Both books are extremely valuable for the practitioner.

DRUGS OF CHOICE is an unbiased, philosophical, enlarged and rational PDR. It can be likened, therefore, to an encyclopedia rather than to a dictionary. We practicing physicians desperately need both types to help us through the maze and lead us to the best treatment for the patient.—*D. A. Glomset*, M.D.

FOR THOSE WHO LIVE AND BREATHE WITH EMPHYSEMA AND CHRONIC BRONCHITIS, by *Thomas L. Petty*, M.D., and *Louise M. Nett*, R.N. (Springfield, Illinois, Charles C Thomas, 1967. $5.50).

In the preface, the authors say "This book is written for the two million patients known to be suffering from emphysema and chronic bronchitis today, as well as for their friends and families who need to know the nature and treatment of these two important diseases."

This is a book to be read by non-medical people. It is 106 pages long, and contains an adequate index and eight pages of definitions of terms. Its 12 chapters cover everything from the anatomy of pulmonary emphysema to portable oxygen equipment and intermittent positive-pressure breathing apparatus.

It is probably too long for the average pulmonary emphysema patient, and too expensive, $5.50, to get widespread use. It can be read very rapidly by a professional person, and certainly he should read it before he recommends that his patients purchase it.

The opinions and ideas reflect the philosophy of Dr. Petty and his University of Colorado group and may be at variance with the therapeutic approach used by a particular individual physician. The book is liberally sprinkled with anecdotes of a personal nature, which may add to its charm for the emphysema patient. It would be most helpful if this book were published in pocket book form costing $1.00 or less. A supplement to the book done in comic book form would also be helpful in reaching patients who no longer know how to do serious reading. In its present form, however, this book represents a valuable tool for some patients in the management of their emphysema and chronic bronchitis.—*James E. Kelsey*, M.D.

SURGERY OF THE AGED AND DEBILITATED PATIENT, ed. by *John H. Powers*, M.D. (Philadelphia, W. B. Saunders Co., 1968. $19.00).

First of all, this book has an attractive cover. That raises the question as to why more medical books don't get away from drab and monotonous covers, and prompts an admonition: Look about more closely, for many recent medical books have departed from cus-

tom, and really are quite colorful and appealing in appearance.

The general premise of this book is stated in the Preface: "Surgery of the aged is different," although growing old is normal. The chapters that follow comprise an orderly presentation of many appropriate subjects, such as the physiology of aging; diseases of senescence ("Cancer, vascular disease, and diabetes account for over 90 per cent of all deaths among aged individuals"); metabolic problems; nutritional problems; elective surgery in old age; the psychology of the aged surgical patient; fracture and orthopedic disabilities of the aged; the treatment of cancer in older patients; surgical mortality; and several other topics. Very little attention is given to operative procedures, for the technique of a procedure varies but little with the age of a patient. Each chapter, incidentally, is introduced with a picture of the contributor, a short biographical sketch, and an outline of the material to be covered in the chapter—an interesting and informative beginning.

In general, the book contains a good review of many subjects related to general surgery. A suspicion persists that surgery of the aged is really not a separate and unique field, except perhaps in the philosophical overtones. We can all agree that no effort is too great and no price too high to save the life of a child, an adult of normal years, even a life-long inhabitant of a mental institution, and yes, even a criminal imprisoned for life. But what effort should be made and what price paid to save the life of a totally senile, totally blind, totally incontinent, totally bedridden patient of 90 years? And who decides? When you have worn yourself out trying to work your way through that question, pause and spare a little sympathy for one of the book's contributors who undertook in substance, to provide an answer. He ended up on all sides of the question, but almost everyone else does, too.

The book is excellent in many respects, but how can anybody, in good conscience, publish a book of 611 pages about "old folks" and not include a contributor from Iowa?—*Daniel F. Crowley*, M.D.



The Iowa Medical Society's Award of Merit was given, at this year's banquet, to Dr. Jack Layton who for many years was a member of the faculty in pathology at the U. of I. College of Medicine and very active in IMS and Blue Shield affairs. He now heads the Pathology Department at the new Arizona University Medical School. Dr. J. H. Sunderbruch, of Davenport, chairman of the IMS Board of Trustees is shown congratulating him.

Resource Facility in Biomedical Engineering at U. of I.

A research resource facility in biomedical engineering will be established at the University of Iowa with a grant from the National Institute of General Medical Sciences. A grant of $90,000 will be used for the first year of operation of the five-year program-project, according to Harold W. Shipton, director of the U. of I. Division of Medical Electronics and a professor in the Department of Physiology and Biophysics.

The new facility has been specially planned to assist institutions in the Midwest in the application of engineering principles to problems in biology, medicine, and hospital operations. "The facility will not undertake work, however, in areas already served by existing educational or commercial laboratories nor will it engage in large-scale engineering production," he said.

Special attention will be given to automation of hospital procedures, with special emphasis on clinical-laboratory procedures; the design of links between biological systems and computers; the remote processing of biomedical data; the design of optical-reading equipment for computers; and signal analysis in electrophysiology.

Professor Shipton said the new facility also is expected to contribute in several important ways to the training of biomedical engineers, scientists, and other personnel from different institutions. These professional personnel will spend periods of two weeks to three months as visiting staff members at the U. of I. facility and will have the opportunity to present their special engineering problems to the facility's staff and also to become better acquainted with the scope and limitations of engineering technology.

At a lower professional level, instruction in the proper use of biomedical instruments will be given to the staff of cooperating institutions, with particular emphasis on equipment maintenance and calibration.

Some additional specialist engineers will be added to the staff so the facility can perform effectively in areas such as optical design, radio frequency methods, and ultrasonic technology.

Iowa Association of Medical Assistants

Inaugural Address

Mrs. Walter E. Green
Davenport

In her address to the Twelfth Annual Assembly of the Iowa Association of Medical Assistants, President Jeanne Green asked for spiritual guidance for the officers and the Assembly.

O God, our Father, as we begin our new year with our new officers, give us the wisdom, serenity and patience to make correct decisions; bless us with open minds, free from prejudice, in order that all our acts may create progress and professionalism for our organization.

* * *

"Knowledge is power; unity is strength"—the theme of the eleventh annual AAMA Convention still rings in my ears as we continue our pursuit of Progress through Professionalism. Let us increase our knowledge; let us use these opportunities which are available to us.

Look for ways of serving your respective communities—in public health work, in cancer prevention or in whatever other activity may be available and attractive to you. Do not limit your activities to your home and your office; extend your hand to at least one community group that can utilize your talents as a civic-minded citizen. Become active in promoting worthwhile local and state legislation. Don't make the excuse that you aren't knowledgeable about such subjects. Pay attention to the material that comes to your doctor's office, and soon you will find that you *are* familiar with pending health legislation. Offer to work with your county and state medical societies on behalf of candidates favorable to their points of view and on behalf of proposals that they have found to be in the public interest.

As medical assistants we are proud of our profession, and we are anxious for all eligible personnel to join our Association. As a group, working together, planning together and exchanging ideas, we have much to offer and we have much to gain! We are members of a team—an important team—and we must do our part or the team will be weakened. By taking advantage of the increasing amounts of educational material offered by our national organization, we have the satisfaction of knowing we are doing our very best to keep up with the members of *our* team.

Attend the seminars offered in our own state, if at all possible. They are carefully planned and are very worthwhile, so the time is not lost from our work. Your doctor will appreciate the extra effort you have made to understand your job better.

Take home with you the enthusiasm you have garnered at this Convention! Take it with you to your chapter meetings. Share it with those who were unable to attend.

We are one year closer to the greatest challenge our IAMA has ever had—the 1970 national convention in Iowa. Your state officers and committee chairmen are prepared to carry out your wishes, but we need and expect the staunch support of *every chapter* and *every member of every chapter!* We cannot be satisfied with past accomplishments; we must meet the challenges of today and all the tomorrows that come. I urge you to be informed, be active, and be true to the ideals and aims of the AAMA. Unity is Strength! United, we can and will have a great convention!



The new president of the Iowa Association of Medical Assistants Jeanne D. Green (Mrs. Walter E.), of Davenport, was installed during the convention in Sioux City, May 17-19.

STATE DEPARTMENT OF HEALTH

ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

Physician Involvement in Home Care

Claire F. Ryder, M.D., M.P.H., and
Pauline G. Stitt, M.D., M.P.H.

Along with changing morbidity and mortality in the United States, there have been changes in the components of comprehensive patient care. There is more hospitalization, but a shorter length of hospital stay. Emergency-room use has increased as much as one hundred to three thousand fold, according to some reports, and there is concern that current uses of this resource are primarily of non-emergency nature. There has been increased use of outpatient departments. The most recent change, however, is a new and increased use for an old type of service. We refer, of course, to home care.

EARLY HOME CARE PROGRAMS

Many terms and much confusion exist around the primary pattern of patient care in the home. The confusion probably stems from the various auspices of programs throughout the nation, and more importantly from the purpose for which these programs were developed. In the United States, the original pattern of patient care for the indigent was hospital or other institutional care, but as early as 1796 the Boston Dispensary Program was established by that city's overseers of the poor so that the poor might enjoy the comforts and dignity of care at home, previously considered a luxury reserved for the wealthy. As voluntary visiting nurse agencies emerged, they too focused on helping the poor stay at home when ill. The next era of home care centered on hospitals, where crowded wards and long stays led to the realization that certain patients could be sent home and receive the necessary care there. This also, however, stressed care to indigent, chronically ill and aged patients, the familiar prototype being the organized home care program established in 1947 at the Montefiore Hospital in New York City.

Dr. Ryder is chief, Home Health and Related Services Branch, Division of Medical Care Adminstration, United States Public Health Service, and Dr. Stitt is chief, Home Care Section, Home Health and Related Services Branch, Division of Medical Care Administration, USPHS.

TODAY AND TOMORROW

Today's home care programs have swung back to an intermediate point of view. They serve the patient who is already in his own home and needs care, but does not require hospital or other institutional care; they also serve the institutional patient who is ready for discharge and now needs only intermittent services of the sort that can be feasibly provided at home. These programs, then, are diverse and flexible. They are not restricted to any one group of patients, but are community-wide in their reach. All age groups, all disease entities and stages of illness, and all economic levels are accepted when medical indications dictate medical care at home as the treatment of choice.

Though home care has a long history, growth has been slow. The implementation of P.L. 89-97 has, however, already made a visible impact on the growth and acceptance of home care as an integral part of comprehensive care. Under both Parts A and B of Title XVIII, reimbursement is possible for home health services provided to eligible beneficiaries. Some states also provide reimbursement for the same services under Title XIX. For other groups in the population there has been a gradual but discernible increase in reimbursement by other third-party payers. Such support for services, added to increased governmental support for establishing basic programs, has resulted in a ninefold increase over the past decade. There are now nearly 1,800 certified home health agencies across the nation.

Although there has been this increase in the number of home health agencies throughout the nation in the past five years, many in the health field are concerned about the community's failure to utilize these new programs. Insufficient utilization of this important resource puts an additional burden on hospitals and extended care facilities, but more importantly it denies to patients who need them those services that can be delivered in their own homes. Reimbursement for home health services under Part A is a post-hospital benefit; under Part B, previous hospitalization of the individual is not required. Nonetheless, in addition to a paucity of patients referred to home health agencies, existing well-established programs report that the proportion of Part B to Part A still

remains in the neighborhood of 2½ to 1. This would suggest that fewer patients are referred directly from hospitals or extended care facilities into home care than those already in the community, perhaps even on the case rolls of the agency.

The alliance of home care with the hospital is essential for a strong program of home health services, and the key to this link between the facilities and resources in the community is the physician himself. This paper presents some of the areas in which encouragement of physician involvement is important, if not an absolute necessity, to permit a continued growth of quality home health services throughout our nation, available to all who need them regardless of age or ability to pay.

THE CARE CONTINUUM IN A COMMUNITY

The hospital, the extended care facility, the skilled nursing home, and the individual patient's own home constitute important facilities in the continuum of patient care in a community, and each supplements and complements the others. Appropriateness of medical care depends on using the right facility for the right patient at the right time. Each resource is a distinct and separate type of offering, and the combined resources work best when there is free flow of patients from one to another as dictated by the patient's needs. A given patient may be best served at one time in a hospital, at another time in another facility and at some other time and under different circumstances, be served best in his own home. The appropriateness and usefulness of each form of service is interdependent one on the other. A hospital, an extended care facility or a long-term care facility has its usefulness altered by how readily it can make appropriate transfer to home care. Similarly the usefulness and appropriateness of home health services depend largely on the responsible individual's ability to recognize medical and social situations in which home-centered care becomes inappropriate and even dangerous, and then being able to carry out prompt transfer to a more suitable setting.

In some communities, information, referral and counseling services are enabling communities to match up patient need with community resources in a coordinated fashion. In others, the concept of a community-wide utilization committee is being planned and tested.

When home care is the treatment of choice for a patient, it offers many potential benefits to that patient and his family, but feasibility factors, including safety, must be considered in accepting or retaining patients in home care. Home care services should be provided on an intermittent basis. When a patient needs 24-hour-a-day care, it is neither feasible nor economically advantageous to give that care at home except, perhaps, for brief periods of time when a crisis exists and the patient cannot be moved to an institution.

CONTENT OF CARE

Home care services may be simple or complex—as simple as a single service, such as visiting nurse services supplementing the care given by the physician, or as complex as the 21 or more services available in some coordinated home care programs. The trend in home care is toward a comprehensive array of physician-directed services. The back-bone of the services is nursing, but in many communities there are other services available to aid the physician and augment and enhance patient care. These include medical social services, various therapies, nutrition consultation, home health aides or homemaker services, and such material supports as medications, appliances, supplies and transportation.

Many communities, however, find a practical solution in moving toward the goal of comprehensive care in an additive approach starting with the basic nursing services and adding other needed services as the program grows in patient load, community resources, understanding and acceptance.

It is of interest to note that to be certified for participation in Medicare a home health agency must provide nursing plus one of the following: physical therapy, occupational therapy, speech therapy, medical social services. However, since reimbursement is on a reasonable-cost basis agencies are not deterred from adding to this minimum service level until they achieve the comprehensive care intended by P.L. 89-97.

THE ROLE OF THE PHYSICIAN

In the context of such diverse, flexible and comprehensive services, there is a need to explore the present and potential involvement of physicians. The physician's first introduction to home care may come when, through concern for one of his own patients, he becomes involved in home care as a vital and integral part of patient care during a certain stage of that patient's illness. He may then discover that whether patients are acutely or chronically ill, convalescent or terminal, home care can often help him provide high quality health services.

Indirectly, a knowledgeable physician may also be involved with home care through his participation in utilization review at a hospital or extended-care facility. In such a review an awareness of the indications for home care or use of other community resources is vital. Without such awareness the review process can depart from appraisal of patient need and planning for continuity of care, and degenerate into a negative form, asking only whether or not the patient continues to need the care of that particular institution. Such a process than becomes merely a fiscal tool, rather than a positive approach that determines whether alternative forms of care might be better for the patient.

A physician may also be involved by serving as a medical consultant, or even medical director, for a formalized home care program in his community.

Whether a physician's connections with patient care in the home are direct or indirect, there are many situations in which he will want to prescribe home care as the most appropriate for selected patients at a given time.

The major areas of physician involvement in home care include: identification of need; appraisal of need and certification; establishing the care plan and testing its feasibility; delivery of services; recurrent reappraisal and replanning; and discharging the patient, as well as in a variety of community services.

Identification of need: Because of his knowledge of the patient's medical needs, the physician should become the principal source for identifying home care patients. Even during his initial evaluation he should be aware of his patient as one who may benefit from skilled nursing or other supplementary health service in the home, but who no longer needs around-the-clock services, supervision or surveillance. The patient who needs skilled services on an intermittent basis but cannot readily travel, is often an appropriate candidate for home care. A physician alert to the judicious use of home care may identify patients who need such service. It is imperative that he identify true need, and recognize home care not as a resource to use as a substitute for some preferred form of care, but as one reserved for occasions when it is genuinely the care of choice for a patient.

Appraisal of need and certification: Appraisal of need and certification for home care services starts with physician decision. An essential characteristic of home care, however, is that the decision to employ such service involves other health workers and cannot be based entirely upon the physician's assessment of the medical needs. Home care also requires assessment of the social, psychologic, and economic characteristics of the patient and his family. To obtain this perspective, a multidisciplinary view is needed. A multiprofessional approach needs not be as formal as a full team conference, but certainly the physician's knowledge will need supplementation by nursing and social work insights gained by visits with the patient and family in the home or institution. The first joint appraisal following such contacts brings together the elements of medical, nursing and social assessment to determine whether or not this patient could be suitably served by home care.

Establishing the care plan and testing its feasibility: Home care is as demanding as hospital or other institutional care. It must be prescribed in detailed written form, and requires sufficient staff to provide the supportive strengths needed outside an institutional environment. Other disciplines are needed to develop and to consider the feasibility of a care plan, but just as in a hospital, when decisions are made, the physician takes the responsibility of seeing that written orders meet the patient's specific needs, and he approves the overall care plan.

Delivery of services: Some physicians have feared that home care would add to their burdens by requiring more physician attention than if the patients were in an institution. In actual experience, however, the physician often finds that home care aids, rather than adds to his already overburdened schedule. He is not alone in providing service to the home care patient. Others of the home care team serve as extensions of the physician, as well as introducing their own special professional contributions. The nurse providing care in the home is alert to impending crises or significant changes in the patient's status, and relays this information to the physician. As a result, physician visits are made on a rational basis, rather than in response to family panic or patient misinterpretation. The quality of effectiveness of visits is thus enhanced. A formalized home care program has many of the advantages of group practice. Multiprofessional participation tends to ease rather than increase physicians' burdens.

Recurrent reappraisal and replanning: A patient's condition and his domestic situation may change. Just as in hospitals, there must be constant assessment and revision of care plans as the situation alters. A nicety of clinical judgment is called for that takes into consideration the multiple factors affecting home care patients. Since one goal of home care is to work toward the patient's personal independence, flexibility is needed in determining when the patient can travel to certain services, rather than having those services brought to him. Furthermore, the physician must be constantly aware of other community resources and should use them selectively, according to his patient's needs. In this regard, since the patient's status may deteriorate to the point that reinstitutionalization is needed, there must be complete assurance that immediate readmission to hospital or nursing home can be arranged.

Discharging the patient: Since home care is not an end in itself, but part of the continuum of care that strives toward patient independence, the physician and his colleagues plan also for the terminating service. They see to it that when termination takes place, it is done so constructively that continuity of health supervision is assured, and that if subsequent care is ever needed, the pathways for resumption are open.

The physician's community services: In home care the physician serves the community in many ways. In the first place, his professional awareness of the need for home care may actually initiate such services and lead to the establishment of a home health agency. Then, once such a resource exists, he is a prime factor in its utilization, in its growth toward a comprehensive program, and in

the evaluation of its operations. Program evaluation constitutes a significant part of his services to the community. It is not enough simply to establish the needs of individual patients and determine how these can be met. Home care is defined as a community service. As such it should be available to all who need it and should provide the diversity of services required by the existing or potential case load. It is important, therefore, that practicing physicians, along with others, take a critical look at the program's response to community needs. Are appropriate patients receiving appropriate care? Are there gaps in service? Are all potential patients coming to the attention of the program? These are genuine concerns for physicians, and the answers to such questions need to be supplied by all physicians in the community whether or not they happen to be involved in the formal review.

THE MEDICAL LEADER

Today's responsible physician is "responsible" not only to his patient but also to the community in which he lives and works. His busy workday must be concerned not only with providing care to his own patients, but in consultation to the community as well. He must recognize gaps or overlaps in community services, and then assist the community in determining its goals, both immediate and long term. Thus in his community activities, as in the rest of his work in home health care, the physician has new and expanding roles in medical care leadership.

Water Sports Safety

The U. S. Public Health Service again announces the availability of a wallet card describing a water survival technique called "Drownproofing." With proper instruction, it can readily be learned by adults and children. Entitled "Safety Tips In-On-And Around the Water," the card is being distributed by the Service's Injury Control Program of the National Center for Urban and Industrial Health in Cincinnati.

"Drownproofing," said Dr. Richard E. Marland, chief of the Center's Injury Control Program, "uses simple aquatic skills to keep a person afloat —even in rough water—for a long period, with a minimum expenditure of effort and energy.

"The technique enables a person to take advantage of his best floating position so that, with simple movements of the arms and legs, he can breathe in an up-and-down bobbing action.

"Drownproofing is not a skill that a non-swimmer can perform successfully without instruction from someone trained in lifesaving and swimming techniques. Parents, particularly, are urged to seek this instruction for themselves and their children at their local pool, swim club or swimming organization."

Drownproofing was developed by the late Fred R. Lanoue, former professor of physical education and head swimming coach at Georgia Institute of Technology. The card also features other safety tips which were prepared in cooperation with American National Red Cross. The card may be obtained free in quantities of up to 100 by writing Public Inquiries, National Center for Urban and Industrial Health, 222 East Central Parkway, Cincinnati, Ohio 45202.

Morbidity Report for Month of April, 1968

Disease	April 1968	March 1968	April 1967	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	454	969	938	For the State
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	26	2	175	Bremer, Dubuque, O'Brien
Whooping Cough	2	18	7	
Brucellosis	1	5	1	Taylor
Chickenpox	901	1250	919	For the State
Meningococcal meningitis	1	0	3	
Mumps	1714	2627	818	For the State
Poliomyelitis	0	0	0	
Infectious hepatitis	65	70	31	For the State
Rabies in Animals	12	9	17	
Malaria (Imported)	0	3	1	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	9	18	27	For the State
Syphilis	46	74	90	For the State
Gonorrhea	322	352	292	For the State
Histoplasmosis	5	3	1	Blackhawk, Johnson, Lee, Story
Food intoxication	0	0	0	
Meningitis (type unspec.)	0	1	2	
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	6	7	5	
Tetanus	0	0	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	0	
H. influenzal meningitis	1	0	0	
Amebiasis	2	2	0	Clinton, Dallas
Shigellosis	2	6	2	
Influenza	0	313	0	

Woman's Auxiliary News

Mrs. Hazel Lammey Honored for 15 Years of Service

The Tuesday luncheon at the State Convention was given in honor of Mrs. Hazel Lammey for 15 years of dedicated service as administrative secretary to the Woman's Auxiliary to the Iowa Medical Society. Dr. Richard Birge, retiring president of the Iowa Medical Society, also recognized Mrs. Lammey at the evening banquet for her many services to the Iowa Medical Society.

The following is a citation that was read by Mrs. Max Olsen, retiring president of the Auxiliary.

"Iowa has had many reasons to be proud of its Auxiliary, but most of them in the last few years have stemmed from the fact that we have had such an able administrative secretary in the person of Mrs. Hazel Lammey. Just 15 years ago this very week, Hazel came to work in the Iowa Medical Society Office. We think that her 15 years of devoted service deserve recognition by this group. Administering the affairs of the Auxiliary in our state calls for a lot of behind-the-scenes detailed work in which she excels. She has been a helper for each of the presidents, and she has been patient with each of us as we blundered or stumbled, in all probability ruining her whole year's schedule. She always has a wise answer, a tactful suggestion, and you knew that she was so loyal that she would try to make you look good even if you had erred along the way. She has made the changeover to a new set of officers a smooth one, rather than a shock to our membership. She seems able to project the aims of Auxiliary through the people she works with, and she imbues in each of us a way of doing our business that accords with the code of ethics which our American Medical Association stands for. She has a store of names, ideas, records, and data that are neatly filed and indexed in her mind for us all to draw upon in time of need.

"Hazel, here is a plaque and a gift for you as outward signs of appreciation, but I think the fact that we all think of you as our personal friend is the highest tribute we can pay to you today. We all hope you will be with us many more years in the future."



At the State Auxiliary's annual convention in Des Moines, on April 30, Mrs. Hazel Lammey, its administrative secretary, received a plaque in recognition of her 15 years' service to the organization. Mrs. M. E. Olsen, of Minden, president of the Auxiliary (right), is shown examining it with her.

Annual Past-Presidents' Breakfast

The first annual past-presidents' breakfast was held in the Veranda Room at Hotel Kirkwood in Des Moines, Iowa. The outgoing president, Mrs. Max E. Olsen, sent personal invitations to all past-presidents, asking them to come to breakfast with her.

Those attending were: Mrs. William A. Seidler, Mrs. James A. Downing, Mrs. Soren Westly, Mrs. Fred Moore, Mrs. Allan Felter, Mrs. James Gerken, Mrs. Elmer Larsen, Mrs. Benjamin Kilgore, Mrs. Arthur Richmond, Mrs. Howard Ellis, Mrs. Henry Boe, Mrs. R. E. Hines, and Mrs. Max E. Olsen. Each guest received a small gavel to be placed on her convention badge, and a colorful hand towel for her kitchen.

Letters were read from Mrs. Marian Brinker, who is hospitalized in Iowa City, Mrs. Charles Henry Flynn, who is in Cheyenne, Wyoming, and is in the nursing profession, and from Mrs. Howard W. Smith, who is in Los Angeles taking care of two elderly aunts and continuing in education and hobbies. Mrs. William Hornaday was not able to attend for health reasons. Mrs. Claire H. Mitchell is teaching full-time, and Mrs. R. F. Nielsen is an interior decorator at Waterloo and could not get away.

It was an enjoyable experience, and everyone

was in favor of keeping up the tradition and making it a Dutch Treat breakfast on Monday mornings, if possible.

Happiness Is Reaching Your Goals

Mrs. C. C. Long
Ozark, Arkansas

Happiness is a bread and butter
sandwich folded over
Happiness is knowing how to to
tie your own shoes
Happiness is walking on the grass
in your bare feet. . . .

Each one of us feels a certain satisfaction when we accomplish something, no matter how big or how small it seems. You experience this after cleaning your house in the spring, or even after getting that "Fibber McGee closet" cleaned out. And so it is at the end of a year when we make reports and can point back and say we raised $10,000 for AMA-ERF, or organized 10 counties, or had 100 career days. This is satisfaction for a job well done; this is happiness in reaching your goals.

Our annual reports show each year the power of the woman as an Auxiliary member, her interest in her husband's profession, her dedication and untiring efforts for her community. I heard an elderly gentleman at home say one day, "If you want to get a job done, just organize the women. I'd rather have a hive full of bees after me than an organization of women." That was a good comparison, for a woman does not give up until the job is finished. A bee produces something very sweet, palatable and worthwhile. Can you remember when honey was a home remedy used to treat all ills—heart trouble, stomach trouble, rash, etc.? But there is the other side of the bee, for it can sting and make you most uncomfortable. So can a woman when she gets out to do something, to get her program in operation.

I have heard rumors that national giving to volunteer organizations is done; that it is hard to get workers, because the volunteer is tired. There are so many demands made upon her now that she is worked to death. She is becoming more selective in what she will volunteer to do.

The organization that will survive these social changes must really have something to offer the volunteer. Our organization will continue to grow and will be made stronger, for it is like the house built upon the rock, and will last forever because of its strong programs and right purpose. But because of the competitive market for the volunteer members, we must make our efforts count for something. Sometimes I think I need an efficiency expert so I will be sure to accomplish something in the time that I have to give.

Mrs. Long, president-elect of the National Auxiliary, gave this address at the Annual Convention of the Auxiliary to the Iowa Medical Society in April.

Our Membership Committee next year is using the theme "Make Your Membership Meaningful." This is good, for the Committee is proposing that Auxiliaries have worthwhile programs to educate and make the members an active part of the group. We hope states will continue to use the member-orientation manual—new this year—to assist them. Membership continues to be one of our greatest problems. Despite all our efforts we continue to lag 100,000 behind the AMA, and most states—except those that are working on 100 per cent membership basis—have an equal lag. It is too early to tell how much our membership will be up over last year, but we are hoping for an increase of 10,000 members.

When you reach one goal, you immediately start to work toward another. Sometimes before you complete one you can see the need for others, for one good thing will lead to another. And so it is with our Auxiliary program.

First the manual for homemakers service was developed. It called for other programs for the homebound and the elderly. So meals-on-wheels was introduced (now "meals-a-la-car"). Then last year the volunteer friendly visitor training was started, and these programs are now all under the title of "home-centered health care." The work of the International Health Committee began with the collection of pharmaceuticals, then books, journals, leper bandages, johnny coats, medical equipment, and now ham radio equipment. We were at first interested in the recruitment of nurses, and you know that this program has grown to recruiting for over 200 careers related to medicine, career days, and over $600,000 given last year alone for scholarships, loans and gifts. In the past 15 years AMA-ERF has received nearly 3 million dollars through the united effort of our Auxiliaries. Package programs were introduced last year, for we believed that by this means our members would be able to present to the public a better program with much less effort. Our members selected the ones that applied to their communities' needs, assisting with their health problems. Our package programs have been highly successful and widely used. Of course some have helped more than others, for VD and health careers have been the most popular. So far this year 400 have been requested, making a total of 800 in less than two years. We shall continue to promote the packages and make them available for your use.

In case you have forgotten some of them they are:

1. Teenage venereal disease
2. Health careers
3. Timely attention to the mental health of children
4. Developing youth health and fitness
5. Block mother packet
6. Gems (good emergency mothers substitute)
7. Immunization
8. Homemakers service

And so the package programs lead to others. The board, at its mid-winter meeting, voted to produce

two more packages for next year: "Sex Education" and "Tobacco, Alcohol and Drugs." These are being worked on right now, and we believe they will be ready for your use by early fall. The board also voted, at that same meeting, to have a special committee on children and youth to develop programs for children and youth.

The board voted to have regional workshops again this fall, for we believe that, more than anything we have done, they are paying big dividends for the Auxiliary on all levels. You must agree, if we can judge from the opinions we have received from those who have attended them. This year we are asking the state participants to share in the expenses again. Six from each state will be invited and their transportation paid: president-elect, and chairmen for AMA-ERF, Community Health, Health Careers, Mental Health, and Safety-Disaster Preparedness. The president will be invited and may substitute. The North Central Region Workshop will be at the Bel Air East Hotel in St. Louis, October 14-15. An AMA representative will share the evening after-dinner time with the AMPAC representative. Two field service men from AMA will be at each regional meeting and will circulate among the discussion groups to answer questions on such topics as pending legislation; recent bills passed; services offered by the AMA to the states; what the Field Service Department is and what it does, etc.

You can see how much our services to the Auxiliary, services to the public and services to our communities have grown. They cover so many and such varied activities that it would be quite impossible to name them all. Nor would I attempt to. In fulfilling its part in the total Auxiliary effort, the National Auxiliary has been attempting to recognize and meet the challenge of all the transitions taking place. The last five years have seen startling growth and changes. We must continue to grow and change with the times, or we shall be left behind.

Bylaws amendments enlarged our board of directors and simplified our national structure. Our national publication was changed in size, format, and finally in name and readership. It now goes to our entire membership. Regional workshops were provided for all the states; package programs were introduced; Home health care projects were organized. Such gigantic strides necessitated careful scrutiny, and we determined that this must be a year of examination and evaluation. Weighing and studying our program, our needs and our potential resulted in two full days of the most thoughtful discussion at our mid-winter board meeting. Here the decision was reached that the Bylaws Committee should offer an amendment this June to raise our national dues to $4.00 per member, but with this explanatory and clarifying clause: "if we are to continue the present service given by our National Auxiliary. . . ."

Let me briefly name a few—all of our publications, MD'S WIFE, DIRECT LINE NEWSLETTER, PACKAGE PROGRAMS, and more, plus the increased postal rates to mail them.

To provide services to states, counties and individuals, it takes six full-time staff members at headquarters, and our salary scale is low in today's market.

Two national meetings each year—fall conference and convention.

Four regional workshops.

A national representative at a meeting of each state Auxiliary every year.

Representation wherever possible at AMA meetings and conferences, and at national meetings of other ancillary organizations.

Part (and I emphasize very strongly the word *part*) of the postage and other clerical expenses for our national officers and chairmen, plus minimum travel expenses for official attendance at meetings.

With your own knowledge of the normally increased cost of material and labor, as you think over these expenditures you probably will not be surprised to know that for the last three years we have had to draw from our rapidly diminishing reserve fund, which now has reached such a dangerously low balance that this dues raise or the complete elimination of some part of our program seem the only alternatives. This is only an increase of $2.00 a year from each member—from each doctor's wife with an interest in and an allegiance to her husband's profession.

I am very glad for a lot of reasons that our national board voted to focus our programs on our youth this year. One is that within two years youth will make up 50 per cent of our population. Another is that they seem to need security more than any other age group right now, and we should do everything within our power to help them. We have certainly done a good job in making a mess of things, so we should feel some responsibility to change them.

If you were to believe everything you read, you would conclude that all our college students and young people are on dope, are called hippies or flower children, and are draft-card burners. This is not true, for the large majority are brilliant, fine, hard-working young men and women. They have higher standards than some in our generation. They must know much more than we did at their age, for there is so much more to learn. In high school, they begin where we left off. The dean of our medical school commented the other day that before very long a medical student would have to do undergraduate work taking five years, instead of four, in preparation for medical school. That fifth year would be spent in taking the first year work of our medical school as it is now. Reason—there is just so much that they must learn now in medicine that they cannot be taught

it all in four years. And so it is in everything. In school now, I would be lost in new math, English and history, and I expect most of you would be too.

You have heard it said that these are exciting times to be living. They are also challenging times, for so much is happening so fast. More scientific discoveries have been made in this century than in all the years previous, and in each decade they double. When I was a teenager there was talk of rockets and a man landing on the moon, but we all thought it impossible and made light of such things. We now have rockets, and a man's landing on the moon seems to be just months away.

But we can also say that these are frightening times, and sometimes even terrifying times. Things are moving so fast that any pollster is foolish to make predictions for more than a week ahead. I attended the AMPAC workshop recently in Washington, where political pollsters were looking into their crystal balls and predicting what would take place in the presidential race. Within two days some of their well studied theories had to be junked, and within another week more of them were out-dated.

There is so much unrest—so much uncertainty—that you can see and feel it in people all around you, regardless of their age or position. Employers see it in their employees, for they are curt with customers and unconcerned about their work; teachers at school see this in their pupils, in their not being able to study for they seem to be under so much pressure. My daughter is doing her practice teaching now and has 25 second-grade boys. She was home over Easter, and in talking about them said that she had recommended two for psychiatric help, but more needed it. In fact she had only two little boys that were happy. They came to school talking about the war, riots and wrecks, and one little boy one morning told about going with his Daddy to Mexico in a big boat after his mother had run off with another man. Daddy carried a big gun.

No wonder they are that way, for when you read the papers and watch the news on TV, it all makes you sick, worried and afraid. You wonder what will happen next, here in this wonderful country of ours, and what you can do to help straighten out this mess.

This is the *now* generation for they are impatient, they want answers *now,* success *now,* jobs *now,* peace *now.* To them we are the *then* generation. And we move too slow.

Maybe you saw the interviewing of college students during the New Hampshire primaries. One boy impressed me with his answer when he was asked why he was working at the headquarters of one of the candidates. In his opinion that was the way to make his views count—at the polls rather than by rioting, demonstrating, burning draft cards, love-ins, etc. I am all for these fine young people and that approach. We should encourage that way of thinking and listen more to our sons and daughters. Seek them out and bring them in to becoming an active part in politics as well as other social activities.

You remember that our forefathers sacrificed much in money and time to serve this country when it was young. Think of just the time that they spent in travel from their home to our capitol, whether it was from Kentucky or Pennsylvania. Then all of a sudden politics were not so important. Business came first, and we let unqualified, questionable people take over and run our government. Politics became a dirty word. We voted for men who needed the job rather than for the best qualified. Now we must change back to having our best people run for office, in this the best country in the world, or accept what we have made for ourselves.

You realize that the women in this country could control the coming election, if they all registered to vote, for they outnumber the men. In 40 states women voters outnumber the men. Think of this—what power we hold in our hands if we choose to use it! But we must be careful with this power, and use it wisely.

A woman at home was so worried that a certain candidate would be elected that, she told me, she prayed every night that he would not. I asked her if she had registered to vote. "Oh no" she said, "I couldn't do that. I always leave that up to my husband."

Well, I believe in prayer too. I believe that God wants his people to pray, but I believe he also wants them to back up their prayers with action.

This is a critical year for many things. We must set our goals even higher. It will take women like you, working with your hearts and minds, to help bring this crazy mixed-up world back into focus.

Security is knowing you still have quite
a few years to go.
Security is having someone to lean on.
Security is a thumb and a blanket.

Thank You! From Mrs. L. H. Prewitt

So many complimentary things were said about this year's exhibits at the state meeting that I want the people who were responsible to share these compliments. There were 14 counties that brought exhibits. I think that is wonderful! I'd like to express my thanks and appreciation for the splendid response. My personal thanks to the Committee chairmen on the state and local levels and to their helpers, including Melissa Larson for loaning her "Barbie" doll and all the accessories for the safety exhibit.

—MRS. LELAND H. PREWITT
First Vice President

Around the Hawkeye State

Polk County

The Polk County Medical Society Auxiliary met at Holiday Inn, South, in Des Moines on May 10, for a luncheon. New officers were elected. Mrs. Ralph A. Dorner was installed as president to succeed Mrs. Byron M. Merkel. Other new officers are Mesdames Floyd M. Burgeson, president-elect; James H. Dickens, first vice-president; Lawrence O. Ely, second vice-president; Charles N. Hall, recording secretary; Henry H. Corn, treasurer; and Robert C. Jones, corresponding secretary.

Past presidents were honored, and Mrs. Gwen Znerold presented a program on "Antiques."

Wapello County

The Wapello County Medical Auxiliary met at a 10 a.m. coffee, recently, at the home of Mrs. Sidney Brody. The assistant hostesses were Mrs. Fox and Mrs. S. C. Bauserman. A report was given regarding the State Convention held in Des Moines.

Webster County

The tenth annual Homebound Handcraft Sale by the Webster County Medical Auxiliary was held April 25-27 at the former Tradehome Shoe Store, in Fort Dodge. This year the Fort Dodge Elks Lodge aided the Auxiliary in the sale for the first time.

Attention County Officers

Would all of the county presidents please send a list of new officers for the coming year to Mrs. Hazel Lammey at the Iowa Medical Society? This is very necessary so that the yearbook can be printed.

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1001 Grand Avenue, West Des Moines 50265

Thank You, Johnson Mal's!

Following the Tuesday luncheon at the state convention in Des Moines, the retiring president, Mrs. Max Olsen, presented a check for $93.20 to the Iowa WASAMA chapter representatives Mrs. Richard Adams and Mrs. Daryl Dorenbos from the members at large in Johnson County. The money will be used for the WASAMA representatives' expenses at regional and national meetings.

Program for Children at San Francisco Auxiliary Convention

An exciting three-day and one-evening program will be offered to the children of AMA and Auxiliary members during the AMA Convention (June 16-19) in San Francisco. The activities will be coordinated by a teen committee under the auspices of the Woman's Auxiliary to the AMA.

Reservations can be made in advance using the registration form in the May issue of MD'S WIFE, or by contacting Mrs. Fernando Gomez, 51 Jennings Lane, Atherton, California 94025, or Mrs. Xavier Barrios, 171 San Benito Way, San Francisco, California 94127. Tickets will go on sale in the Borgia Room (teen headquarters—entrance on Post Street), St. Francisco Hotel, at 11:00 a.m., Sunday, June 16. Registration fee is $1.00.

The activities are:

Monday, June 17

1:30 p.m. Five-hour excursion by boat and bus. Bus ride to Fisherman's Wharf, and boat cruise of San Francisco Bay, disembarking at Tiburon; bus to Sausalito, returning over Golden Gate Bridge to St. Francis Hotel. (Stop-over for snack not included)—$3.75

Tuesday, June 18

10:30 a.m. Five-hour bus excursion to San Francisco Zoo, Steinhart Aquarium, Japanese Tea Garden. (Stop-over for lunch not included in ticket)—$2.50

Wednesday, June 19

10:30 a.m. Walking tour of Chinatown, includes tour of Fortune Cookie factory and lunch at Four Seas Restaurant—$3.50

7:00 to 11:00 p.m. "Rock" Concert at San Francisco Medical Society Building, 250 Masonic Avenue. Music by the noted "Rock" bands, SONS OF CHAMPLIN and SAL CARSON; entertainment by the MARLINS. Refreshments and transportation included—$3.50

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

President-Elect—Mrs. D. W. Coughlan, 5410 Grand Avenue, Des Moines 50312

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Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Assistant Editor—Mrs. D. A. Mater, 302 South Fourth Street, Knoxville 50138



Personals



Dr. Hermann M. Burian, a professor of ophthalmology at the U. of I. College of Medicine, served as a visiting professor at the Northwestern University Medical School, in Chicago on May 24-25. He presented the twenty-fourth annual Sanford S. Gifford Memorial Lecture on "The Pathophysiologic Basis of Amblyopia and Its Treatment." The late Dr. Gifford was chairman of ophthalmology at Northwestern, and the lectureship was established by the Chicago Ophthalmological Society.

Dr. Frederick C. Blodi, head of ophthalmology at the U. of I. College of Medicine, has been made a special consultant to the director of the National Institutes of Health. He will be a member of the Vision Research Training Committee of the National Institute of Neurological Diseases and Blindness, which reviews applications for training grants and makes recommendations thereon, and determines areas in which activities should be initiated or expanded.

Representatives of the Pottawattamie County Medical Society and law enforcement agencies met at noon on May 10 at the Elks Country Club, Council Bluffs, in an effort to arrange to have an authorized person available to draw blood specimens from drunken-driver suspects. Since April 19, no physician had been available to take blood samples for clinical tests to determine if the drivers were legally drunk, and the county attorney wanted blood drawn by a doctor in all instances. At the meeting it was agreed that a qualified technologist should be hired, if possible, to draw the blood, but that a physician must designate her as his agent, usually by telephone, on each occasion.

Dr. E. J. Liska, of Ute, had a coronary attack late in April and was hospitalized.

Dr. Eugene Goldberg, of Waterloo, was elected, in April, to succeed **Dr. James Rathe,** of Waverly, as president of the Northeastern Division of the Iowa Heart Association. Dr. Goldberg is also president of the Iowa Society of Anesthesiologists.

Dr. John W. Billingsley, an IMS past-president and merit-award winner, was given the Distinguished Rotarian Award in his home town, Newton, on April 30.

Dr. William Spencer, of Osage, was reelected president of the Mitchell County Tuberculosis and Health Association at the organization's annual meeting on April 16. **Dr. L. K. Lackore,** of St. Ansgar, was chosen as vice-president.

At a meeting of the North Central Division of the Iowa Heart Association, held in Algona on April 25, the guest speaker was **Dr. Allyn L. Mark,** a cardiovascular research fellow and an instructor in internal medicine at University Hospitals, Iowa City. **Dr. Luke Chang,** of Mason City, is president of the North Central Division.

The guest speaker at the May 1 meeting of the Johnson County Medical Society, **Dr. Bruce Stewart,** of the Cleveland Clinic, spoke on kidney transplants.

During a one-year leave-of-absence from his post as head of orthopedic surgery at the U. of I., **Dr. Carroll B. Larson** is directing a study of all the Shriners' hospitals for crippled children, to recommend operational guidelines that will make the units more useful. There are 24 such hospitals in three nations. Dr. Larson has been a member of the Shriners' medical advisory board for 10 years, and has been its chairman for the past six years. In the course of his inspections he has lectured at the University of Utah and at Harvard University, and he is scheduled to speak at the Variety Hospital, Miami; the University of California Medical School, San Francisco; the University of Michigan; and Cornell University, Ithaca, New York.

Dr. Sidney L. Sands, a Des Moines psychiatrist, addressed the annual forum of the North Iowa Mental Health Group, at the Holiday Lounge, Clear Lake, on May 1.

Dr. James Rathe, of Waverly, was accepted as a fellow of the American College of Physicians at the organization's annual meeting in Boston, during April. To be eligible for that status, an internist must engage in research, take postgraduate courses, prepare papers and take written and oral examinations.

At a meeting of the Rotary Club of Independence, on April 9, **Dr. Chester McClure,** a staff member at the Mental Health Institute there, spoke on hallucinogenic drugs. Among other things, he told his audience he first became acquainted with them as a witness to experiments performed on mental patients several years ago. In one instance a woman's temperature rose to 109°F, and she died despite the application of ice packs in an effort to save her. He said LSD can produce all types of actions and thoughts, but that the usual pattern is an extremely pleasant feeling, followed by deep anxiety and fear. "Studies of such drugs haven't brought out anything good for medical science," he declared, "and there is no promise for their use as an aid in treatment of the mentally ill."

Dr. Donald Hurlbut, who has practiced for the past four years in Marion, is taking over the practice of **Dr. Irving Ringdahl,** at Elkader, on June 1. Dr. Hurlbut took his M.D. degree at the U. of I. College of Medicine in 1962 and interned at St. Luke's Methodist Hospital, Cedar Rapids. Dr. Ringdahl plans to start a residency in psychiatry.

Dr. James A. Cornish, of Storm Lake, addressed a meeting of the Buena Vista County Nurses, April 18, on nursing care of the surgical patient.

Dr. Reuben Widmer, of Winfield, was confronted by mass casualties on April 19, when an explosion and fire occurred at the Stucker Fertilizer Co., releasing organic phosphates. The owner-operator was killed, and a 56-year-old employee was burned as he tried to rescue his employer. "I'd say 20 to 24 people felt some effect of the phosphate," he reported, "but only one was hospitalized. The others were affected only very mildly." On the evening of the fire he gave each fireman an antidote for organic-phosphate poisoning.

George N. Bedell, M.D., an associate professor of internal medicine at the U. of I., delivered a series of lectures in Europe and the Middle East during May at the request of the Bureau of Educational and Cultural Affairs, a division of the State De-

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partment. He spoke in Athens, Greece, and in Nicosia, Cyprus, and participated in the annual Middle East Medical Assembly at Beirut, Lebanon.

At the University of Nebraska College of Medicine, in Omaha, **Dr. Merrill T. Eaton** has been named chairman of the Department of Psychiatry and director of the Nebraska Psychiatric Institute. He joined the Nebraska faculty in 1960, and has been clinical director of adult outpatient services and a professor of psychiatry.

Dr. Paul D. Anneberg was named vice-president of the Carroll County U. of I. Alumni Club at the group's annual meeting on April 19 at the Carroll Country Club.

Dr. Kenneth E. Lister, an Ottumwa surgeon who practiced at Chariton prior to World War II, was the principal speaker at Chariton's program on May 4 honoring **Dr. Albert Yocom.** It had been approximately 60 years since Dr. Yocom started practice there and established his hospital. **Dr. C. W. Seibert,** of Waterloo, president of the Iowa Medical Society, and **Drs. George Scanlon** and **Sidney Ziffren,** of Iowa City, also spoke briefly. The city renamed one of its parks for Dr. Yocom.

Dr. G. M. Gibbs, of Burlington, asked that his resignation as physician for the Des Moines County Home become effective immediately, rather than at the end of the calendar year, when he learned that the couple who had just been hired as co-superintendents of the institution had



The John T. Sanford Award was presented by the IMS president, Dr. Richard F. Birge (center) at this year's banquet to Leland Johnson, Ph.D., a professor of biology at Drake University (left), and Mr. Dean Stroud (right), who recently retired following many years as a science teacher in the Des Moines schools. Dr. Johnson and Mr. Stroud work with the IMS staff, year after year, in arranging the Hawkeye Science Fair. Dr. Sanford was the first president of the IMS, back in 1850.

dismissed an LPN without his knowledge and consent. He had held his post for about eight years.

Dr. Kenneth MacDonald, an associate professor of preventive medicine and environmental health at the U. of I., has been elected a fellow of the Royal Society of Tropical Medicine and Hygiene, London. He is also a member of the American Society of Tropical Medicine, and was recently appointed by **Governor Harold Hughes** to write the examinations in hygiene and public health for the Iowa Board of Examiners in the Basic Sciences.

Dr. James L. Goddard, of Washington, D. C., head of the U. S. Food and Drug Administration, addressed an overflow crowd of doctors and medical and pharmacy students and visitors, May 1, in the Pharmacy Auditorium at the University of Iowa. He called for practicing physicians to take a more important role in the investigation of new drugs in order to help speed the more vital ones to market. He pointed out that it takes an average of seven years for a new drug to gain the department's approval, once it has been introduced for clinical tests. "For those new drugs which represent a truly significant therapeutic advance, I would say that the benefits to patients are too long delayed," he declared. He thinks that practicing physicians can help most by careful observation and reporting of side effects of drugs already on the market, however. Turning to another topic, Dr. Goddard said there must be changes in America's health-care system to accommodate the poor. He cited high infant mortality rates and a high incidence of tuberculosis in poverty areas.

Dr. Dale L. Christensen was elected chief of staff of the Stewart Memorial Community Hospital, in Lake City, on April 12. He replaces **Dr. Paul Ferguson,** who had resigned after serving since the opening of the institution in 1962.

Dr. Richard M. Caplan, an associate professor of dermatology at the U. of I., was elected to membership in the American Dermatological Association at a recent meeting of the organization in Puerto Rico. The membership is limited to 125, and **Dr. Robert G. Carney,** professor and head of dermatology at the U. of I. is also a member.

On May 3, at the start of "Arthritis Month," **Dr. William D. Paul,** medical director of the Iowa Chapter of the Arthritis Foundation and a professor of physical medicine and rehabilitation at the U. of I., addressed a public meeting in Keokuk sponsored by the Keokuk Education Association. He said that the biggest step being taken currently in arthritis research involves the use of the electron microscope in examining connective-tissue fibers. It will enable researchers to follow their reactions to experimental medications. He also said that 85 per cent of the crippling effects of rheumatoid arthritis can now be avoided by early diagnosis and treatment.

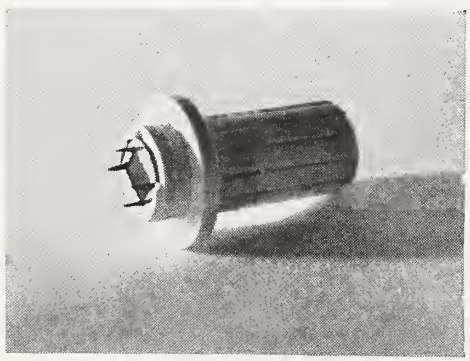
Dr. Lee W. VanVoorhis, of Iowa City, served as chairman of the Cancer Society's fund-raising drive in Johnson County during April.

Dr. George W. Anderson, an Iowa City internist, is the new president of the Iowa Clinical Medical Society, succeeding **Dr. Ernest O. Theilen,** a professor of internal medicine at the U. of I. Meeting in Des Moines, the group criticized both the capital city authorities and the Iowa Water Pollution Control Commission for the city's dumping raw sewage into the Des Moines River during a change-over to the newly rebuilt sewage-treatment facilities. The internists agreed that the action would create "unnecessary hazards to human health and [insure] the death of the river downstream for years to come."

At the spring meeting of the Northwest Division of the Iowa Heart Association, held at Hammer's Restaurant, in LeMars on April 23, the guest

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speaker was **Dr. Donald Warkentin,** an assistant professor of internal medicine at the U. of I.

Speaking at the U. of I.'s second annual Iowa Cancer Programs Symposium, on April 24, **Howard R. Bowen, Ph.D.,** president of the University, suggested that regional health-care centers for rural areas, including transportation systems similar to those now used by University Hospitals would serve to correct the uneven distribution of physicians. He said rural areas might also be aided by "the establishment of convenient dispensaries in the smaller towns or open country." He declared that the University is increasing the number of health professionals being trained, and that "the present program of expansion of the U. of I. is adequate to meet Iowa's obligations toward the nation's supply of physicians without building another medical school in the state."

The following physicians were elected to life Membership in the Iowa Medical Society by the House of Delegates on April 28. Life Membership is accorded physicians who have practiced for 50 years and have been IMS members for 30 years, and it entitles them to dues exemption without terminating any of their membership privileges. They are **Melvin J. McVay, M.D.,** Lake City; **William W. Weber, M.D.,** Pomeroy; **Robert G. Mellen, M.D.,** Clinton; **George J. Pearson, M.D.,** Burlington; **Ernest J. Voigt, M.D.,** Mediapolis; **Henry J. Moershel, M.D.,** Homestead; **Clyde F. Watts, M.D.,** Marengo; **Robert L. Feightner, M.D.,** Fort Madison; **Wayne J. Foster, M.D.,** and **B. L. Knight, M.D.,** Cedar Rapids; **Paul G. Ingham, M.D.,** Mapleton; **William R. Hornaday, Sr., M.D.,** Des Moines; **George A. Jardine, M.D.,** New Virginia; **Frederic L. Wilson, M.D.,** Sioux City; and **Kenneth L. Thompson, M.D.,** Oakland. At its May 1 meeting, the House of Delegates awarded a Life Membership to **Clarence E. Broderick, M.D.,** of Cherokee.

Dr. U. J. Collignon, of Council Bluffs, was reelected president of the Pottawattamie County Tuberculosis and Health Association on April 25. **Dr. I. J. Hanssmann,** also of Council Bluffs, was named medical adviser to the organization.



At its annual meeting in Des Moines on May 8, the Iowa Thoracic Society honored Dr. William Spear for 40 years of service and Dr. Philipp Cahn for 25 years of service. Dr. Spear (left) has been superintendent and medical director of the Oakdale Sanatorium, and Dr. Cahn (right) has been a physician there.

On April 25, **Dr. Robert L. Todd,** of Burlington, and **Dr. F. O. W. Voigt,** of Oskaloosa, gave a course in cardiopulmonary resuscitation to physicians from five counties at the Klein Memorial Hospital, Burlington, and during the two previous weeks they had put on identical programs in Bloomfield and Ottumwa. The project is sponsored by the Iowa Heart Association. After completion of the series of meetings for physicians, instruction will be offered to nurses and other hospital personnel, rescue squads, and similar groups.

Dr. Thomas C. Piekenbrock, a Dubuque neurologist and psychiatrist and chairman of the Governor's Commission on Mental Health, was questioned by a DES MOINES REGISTER staff writer regarding the prevalence and probable causes of glue-sniffing and drug-taking adolescents, after the doctor had addressed assemblies at the high schools in Dubuque on those topics. Asked if he saw glue and drug addiction as a problem there, Dr. Piekenbrock said: "The only problem I see here is the prototype of the youngster who gets involved with glue and drugs. He is the youngster who doesn't communicate with his family. . . . In past generations the continuity of the family kept kids on the straight and narrow. . . . Today more kids are seeking out their own peers—not their parents—for the counseling they need. And it's darned poor counseling they get!"

In response to the reporter's request for a suggested remedy, Dr. Piekenbrock said: "If it is the trend in our society that parents are too busy for their kids, then they must support community activities—such as recreation centers, for example —which will give kids the counseling they need."

Dr. Paul Meyers, of the Gilfillan Clinic at Bloomfield, spoke to the Medical Careers Club there, late in April, on x-ray diagnosis and therapy, and took the club members on a tour of the x-ray laboratory at the Davis County Hospital.

The Republican Women's Club sponsored a meeting at the Party's headquarters in Ottumwa, April 30, at which **Dr. David W. Wetrich** related his experiences in Vietnam with the Army Medical Corps, and showed slides that he had taken there. Articles such as soap, canned foods, playing cards, cookies and other small items were collected for shipment to Vietnam. Dr. Wetrich formerly practiced in Ottumwa, but he intends shortly to begin specialty training at University Hospitals, Iowa City.

William J. Hausler, Jr., Ph.D., was the guest speaker at the annual meeting of the Clinton County Tuberculosis and Health Association, in Clinton on May 1. Dr. Hausler is director of the State Hygienic Laboratory, in Iowa City.

Dr. John DeGroote, who has practiced in Lake City since October, 1963, will begin a residency in internal medicine at the Alabama Medical Center, in Birmingham, on July 1, following his summer National Guard duty in Hattiesburg, Mississippi.

On May 9, **Dr. Fred J. Ansfield,** professor of clinical oncology at the University of Wisconsin Medical School, **Dr. Paul Ferguson,** of Lake City, chairman of the IMS Committee on Medicine and Religion, and **Rev. Russell C. Striffler,** chaplain supervisor at Iowa Methodist Hospital, Des Moines, presented their program on cancer control for clergymen of 11 central Iowa counties at the Memorial Union on the ISU campus in Ames. On May 8, Dr. Ansfield had participated in a similar program for clergymen from 11 northwest Iowa counties, held in the Methodist Church at Laurens.

William H. Olin, D.D.S., a professor of otolaryngology and maxillofacial surgery at the U. of I. College of Medicine, has been named president-elect of the American Cleft Palate Association, an international congress of physicians, dentists and speech pathologists. Last September he was made president-elect of the Midwestern Orthodontic Society.

Dr. Earle Stine, Jr., of Ida Grove, announced early in May that he would shortly open an office in Holstein, and would keep office hours there on Monday, Tuesday, Thursday and Friday mornings each week.

Dr. Wendell K. Downing, a proctologist, was the guest speaker at the May 15 meeting of the Des Moines Chapter of the Medical Assistants' Association, held at Noah's Ark Restaurant.

At the annual meeting of the organization, held at Hotel Savery, Des Moines, May 9, the Iowa Tuberculosis and Health Association changed its name to the Iowa Tuberculosis and Respiratory Disease Association. **Dr. William B. Galbraith,** of Cedar Rapids, succeeded to the presidency of its medical section, the Iowa Thoracic Society, on that occasion; **Dr. George G. Spellman,** of Sioux City, was chosen president-elect; **Dr. Montague S. Lawrence,** a professor of thoracic surgery at the U. of I., was named vice-president; **Dr. Robert W. Kent,** of Tipton, was elected secretary-treasurer; and **Dr. Paul Scott,** of Ottumwa, **Drs. Sergio Rabinovich** and **Ian Maclean Smith,** of the U. of I. Department of Internal Medicine, and **Drs. James E. Kelsey** and **Joel D. Teigland,** of Des Moines, were named to the executive committee. **Dr. George N. Bedell,** of the U. of I. Department of Internal Medicine, was chosen as Iowa's repre-

sentative on the governing council of the American Thoracic Society.

Charles A. Berry, M.D., director of medical research and operations at the Manned Spacecraft Center, Houston, was the guest speaker at the Iowa Engineering Colloquium, May 13, on the campus of the U. of I., in Iowa City. He is responsible for planning, implementing and continually evaluating the Center's medical research and the medical aspects of its space-flights, and he is the Center's medical spokesman.

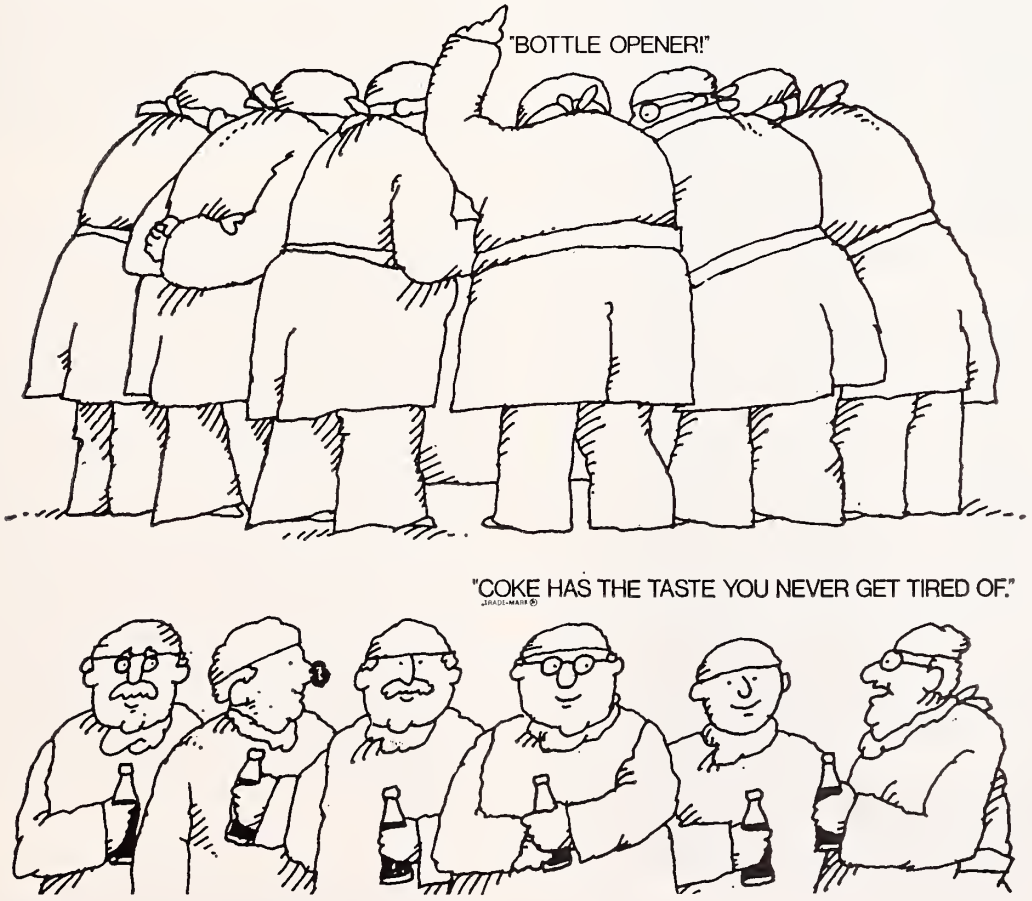
The 22-bed psychiatric section of St. Francis Hospital, Waterloo, will open on June 1. **Drs. Otto C. Della Maddalena** and **Philip Hastings,** psychiatrists, have been instructing the nurses in the procedures that will be required of them there. Among other more usual facilities, the section will contain a laundry room where patients may care for their own clothes, if they wish.

Dr. E. W. Ebinger has resumed his general medical practice in Ottumwa after recovering from a two-month-long illness. He has practiced there for 17 years.

At the April 28 meeting of the IMS House of Delegates, **Mr. Maurice A. Harmon,** the newly appointed head of the State Department of Social Services, said that there had been 160 cases of child-abuse reported by county departments of social welfare during the fifteen months that ended on March 30, 1968. More are being reported, he said, since the passage of the Abuse of Children Act by the 1965 General Assembly of Iowa, and he called attention to the fact that physicians, school people and neighbors, as well as social workers, can now report their suspicions in such cases without incurring libel suits. He sought cooperation from physicians, in particular, because child abuse is not peculiar to families with which social workers have contacts. "These cases come from all social and economic groups, and are not limited to families with financial problems," he said.

Reports can be made to welfare departments, county attorneys, sheriffs, policemen, or judges of juvenile court. Within 96 hours an investigation must be made and a report rendered to the court.

Of the 160 reported cases, 33 were concerning children under two years of age; 27 from two to five years; 42 from five to 10; and 53 over 10 years of age. Abuse was ruled out in only 21 of the 160 cases. In 40 cases there had been previous reports



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of abuse to the child. Bruises and welts were found in 89 cases; abrasions and lacerations in 23; bone fractures in nine; skull fractures in three; brain damage in two; and death in two instances. School and child-care agencies had made 46 of the reports; doctors and hospital personnel 20; public social agencies 19; public health nurses 6; and police 5. The remainder had been made by concerned individuals.

Dr. Harry Harper, Jr., of Fort Madison, discussed "Concepts of Family Services" at the spring meeting of the Southeast District Welfare Association, in the Roberts Memorial Building at Keosauqua, on May 14.

Dr. M. L. McCreedy, the chief of staff, had a part in the dedication of the new Washington County Hospital, in Washington, Iowa, on May 12. The original building erected in 1912, was the first rural county hospital to be established in the United States. The new building, a 50-bed facility, was constructed at a cost of $1,554,000.

The U. of I. has been given $100,000 by the Kresge Foundation to assist in the construction of the Health Sciences Library. The sum will endow the Twenty-Four Hour Study Room on the main floor of the structure. This contribution, the largest thus far, puts the pledge level past the half-way point, and **Dr. Donovan F. Ward**, of Dubuque, the national campaign chairman, said it constitutes "a challenge to the University's alumni and friends."

Dr. Arthur P. Long, who has resigned as state health commissioner, effective June 30, was quoted in an Associated Press article on May 9 as having told members of the State Board of Health: "There is no acceptance or trust of professionalism in state government. I would like to see the day when the legislature will have as much confidence in us as professionals in government as it does in paid lobbyists. For some reason we are suspect." The article went on to say that Dr. Long declared the Health Department's air and water pollution control programs at a near standstill because salaries were too low to attract qualified technicians, and that the Department's Environmental Health Division is short 10 engineers for the same reason. The article reported his proposing creation of an agency to coordinate the efforts of the various state departments and agencies. "We operate in the dark much of the time," it quoted him as saying.

Early in the morning of May 8, someone broke into the office of **Dr. John Weresh**, at Atlantic.

Police saw a man running from there at 4:15 a.m., and gave chase. The burglar dropped a box containing a prescription medication, but whatever he got away with was not reported. No morphine or other strong narcotics were taken.

Dr. Andrew C. Smith, of Waterloo, is the Black Hawk County chairman for the multiple sclerosis Hope Chest Drive, extending from May 12 to June 16.

At a symposium in Dubuque, on May 9, sponsored jointly by the Dubuque County Medical Society and Lederle Laboratories, **Dr. Robert J. Freeark,** a professor of surgery at the Northwestern University Medical School, called for spending more attention and money on the treatment of accident victims. "The country is constantly talking about putting more funds into heart disease, cancer and stroke research, but those are illnesses that most frequently affect the elderly. Accidents affect primarily the young—the wage earner, the man with dependents who has many years ahead of him if he can survive."

Dr. Ralph J. Rettenmaier participated in a discussion of marijuana and other drugs on May 16 in his town, Burlington. The other panelists were **Rev. Fr. Arthur Perry,** principal of Notre Dame High School, **R. J. Cowles, D.V.M.,** and **Mr. Eugene Loose,** a member of the Burlington Police Department.

Dr. John C. MacQueen addressed the State Board of Health on May 9, presenting the statistics on physician distribution which he had given the IMS House of Delegates two weeks previously, and to other audiences on previous occasions. He reported that the population of Iowa has increased by only half a million in the past 55 years, but that the number of physicians has dropped from 3,567 in 1910 to 2,431 in 1965. In 1965, he said, there were 12 counties where the population/physician ratio is greater than 2,500 to 1, and he predicted that by 1975 there will be 34 counties in that category. An acceptable ratio is said to be between 1,000 and 1,500 to 1. He said the trend toward concentrating both population and doctors in the larger towns and cities will continue, and that regional health planning will be needed to solve the medical problems of rural areas. Dr. MacQueen is a professor of pediatrics and an associate dean at the U. of I. College of Medicine.

Dr. C. H. Denser, Jr., a Des Moines pathologist, lectured and made a slide presentation to an

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audience of about 175 Iowa Wesleyn college students and other citizens in Mt. Pleasant, on April 25, regarding the danger signals and the early diagnosis and treatment of cancer.

Dr. Selig Korson, his medical staff and the patients at the Independence Mental Health Center held their annual open house on Sunday afternoon May 5. It was the tenth such event. The patients acted as hosts and hostesses, guiding tours, serving refreshments, parking cars and, in general, greeting visitors. A display in the main auditorium contrasted the situation when the hospital was purely custodial, with the treatment which is provided patients today. Two "slide stories" were also shown, to portray "MHI Today" and "The Student Nurse Program."

Dr. Paul Gikas, an associate professor of pathology at the University of Michigan, addressed the May 7 meeting of the Scott County Medical Society, at the Outing Club, in Davenport, on highway-accident problems. He said that 50 per cent of the people who die as the result of motor-vehicle crashes "die under potentially survivable conditions," and that "the automobile industry is beginning to realize there is such a thing as injury-prevention." He had testified on the subject at a U. S. attorney general's hearings on automobile safety. A second speaker at the Scott County meeting was **Mr. Donald Johnson,** of West Branch, a candidate for the Republican gubernatorial nomination.

At a short course on nursing- and retirement home-administration in Iowa City, on May 3, **Jay Melrose, Ph.D.**, director of clinical services at the U. of I. Speech and Hearing Center, said that he used to think, when elderly people with auditory difficulties told him "Don't make it louder; give me more time to hear," that they wanted more time in which to comprehend what been said. But research showed him he was wrong. The elderly understood no better when they were given twice as much time to consider what had been said to them. Rather, what they wanted was to have the duration of speech-sounds lengthened. Various types of recordings can be replayed at the drawling tempo that meets these people's needs, and the requisite machines might be made available to them just as large-print versions of books are provided to the partially blind.

Mr. Charles W. Caldwell, director of operations for the Iowa Regional Medical (heart disease, cancer and stroke) Program at Iowa City, was the principal speaker at the annual meeting of the

Southeastern Division of the Iowa Heart Association, in Ottumwa on May 9. His topic was "The Iowa Heart Association, and Government Health Programing."

In a guest editorial in the May 8 edition of his town's newspaper, the CRESCO TIMES, **Dr. P. A. Nierling** encouraged people to seek complete physical examinations yearly. He went on to give his recipe for a long and happy life: "Get plenty of rest; watch your weight; kick the cigarette habit; get off the golf cart; observe moderation in eating and drinking; avoid overworking; get plenty of exercise; develop a hobby; and watch out for careless drivers." He concluded by recommending that laymen read the book YOUR HEART HAS NINE LIVES, available in paper covers for 75¢. "It is easy reading," he declared, "and well worth the money even if you only read the first 30 pages."

Dr. Fredric W. Wilson, of Sioux City, has notified the JOURNAL that his address, henceforth, will be 1740 Graham Drive, Hester Heights, Eugene, Oregon 97405.

On August 1, **Dr. David Lee Ferguson** plans to open a general practice in Grinnell. He is a 1965 graduate of the U. of I. College of Medicine; he interned at Broadlawns-Polk County Hospital, Des Moines; and since then has been in the Army Medical Corps, stationed at the Examining and Entrance Station in Kansas City, Missouri.

At the annual meeting of the Iowa Association of Pathologists, held in Des Moines on April 29 in conjunction with the IMS convention, **Gilbert R. Clark, M.D.**, of Waterloo, succeeded to the presidency, and the following slate of officers were elected: **John W. Green, Jr., M.D.**, Des Moines, president-elect; **Charles B. Preacher, M.D.**, Davenport, secretary-treasurer; **Fred Dick, Jr., M.D.**, Waterloo, councilor, American Society of Clinical Pathologists; **K. R. Cross, M.D.**, Iowa City, and **C. H. Denser, M.D.**, Des Moines, assemblymen, College of American Pathologists; **R. F. Birge, M.D.**, Des Moines, and **F. W. Stamler, M.D.**, Iowa City, members of the Executive Council of the Iowa Association of Pathologists.

Dr. Gary Bloom, a recent medical graduate of the University of Iowa who is completing a tour of military duty in the Far West, has agreed to enter practice soon with **Drs. L. J. O'Brien, N. A. Schacht** and **Maurice A. Kraushaar,** in Fort Dodge.

Dr. Gary P. Hayes, who has practiced for the past two years in Eldora, received notice in mid-May that he must enter military service.

At the scientific session for physicians presented by the Iowa Heart Association at the Holiday Inn, South, Des Moines, on May 18, **F. L. Benoit, III, M.D.,** an assistant professor of both internal medicine and nuclear medicine at the U. of I., discussed "Scanning Technics in the Diagnosis of Cardiopulmonary Disease"; **J. L. Ehrenhaft, M.D.,** a professor of thoracic surgery at the U. of I., traced "The Natural History of Coronary Artery Disease"; **Roger L. Cunningham, M.D.,** a fellow in internal medicine at the U. of I. College of Medicine, talked on "The Clinical Diagnosis of Coronary Artery Disease"; **Elliot Rapaport, M.D.,** a professor of medicine at the University of California Medical School, San Francisco, spoke on "The Aggressive Management of Acute Myocardial Infarction"; **William H. Sewell, M.D.,** a cardiac surgeon at the Guthrie Clinic, Sayre, Pennsylvania, outlined "The Surgical Approach to Coronary Artery Disease"; and **Mark L. Armstrong, M.D.,** an associate professor of internal medicine at the U. of I., discussed "Prevention of Coronary Artery Disease." At the non-medical session, that same day, Dr. Ehrenhaft spoke on "Heart Transplants"; **Charles H. Gutenkauf, M.D.,** of Des Moines, spoke on "The Coronary Care Unit"; **Paul From, M.D.,** of Des Moines, discussed "EKG Telemetry" and "EKG Via Telephone"; **Walter B. Eidbo, M.D.,** of Des Moines, spoke on "Atherosclerosis"; and **Manuel G. Calvelo, M.D.,** a research fellow at the U. of I. College of Medicine, described "Cine-Angiography."

Dr. Adrian E. Flatt, a professor of orthopedics at the University of Iowa, presented the Wallace Graham Memorial Lecture at Queen's University, Kingston, Ontario, Canada on April 26. His topic was "Surgical Rehabilitation of the Rheumatoid Hand."

Dr. James T. Bradbury, a professor of obstetrics and gynecology at the University of Iowa, was a visiting professor in the Department of Obstetrics and Gynecology at Duke University May 1-4. While at Duke he participated in three seminars and gave two lectures on "Corpus Luteum" and "Trimester Estriol."

Dr. William C. Keettel, head of obstetrics and gynecology at the University of Iowa, led a round-table discussion on "Premature Menopause," participated in a session on "Induction of Labor," and spoke on "Functions of a Residency Review Committee" at sessions of the American College of Obstetricians and Gynecologists in Chicago May 6-9.

Dr. Charles A. White, an associate professor of obstetrics and gynecology at the University of Iowa, had an exhibit on "Continuous Intravenous Obstetrical Analgesia" at the May 9-11 meeting of the Midwest Anesthesiology Conference, in Chicago. On May 15-17 he presented papers on "Detection and Management of Umbilical Cord Presentation and Prolapse" and "Evaluation and Treatment of Urinary Incontinence in Women" at meetings of the Ogden Surgical Society and the Utah Obstetrical and Gynecological Society.

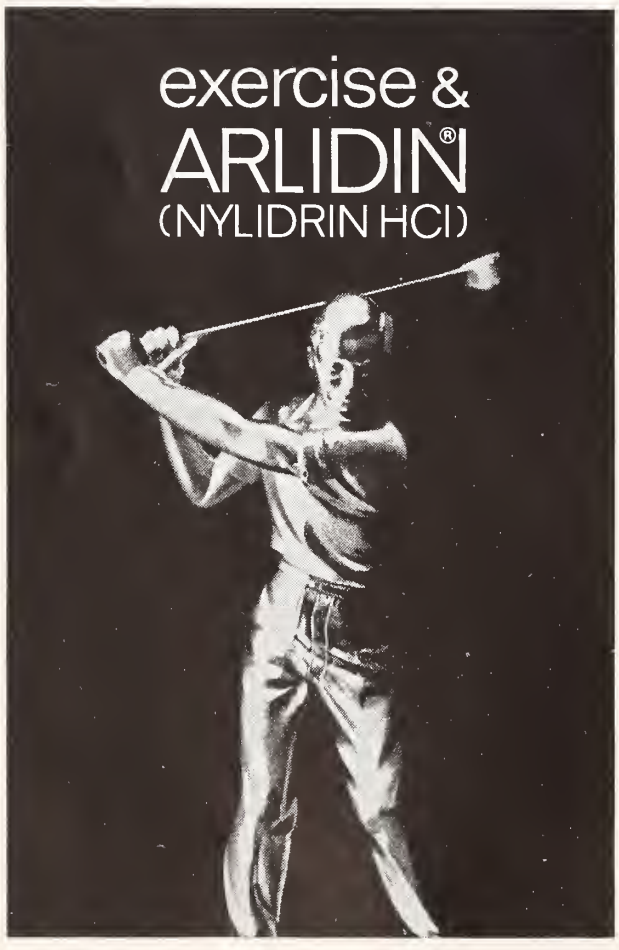
Dr. Clifford P. Goplerud, a professor of obstetrics and gynecology at the University of Iowa, spoke on "Drugs in Pregnancy" and "Complications of Abdominal Pregnancy" at a meeting of the Nebraska State Medical Association on April 30 and May 1.

Deaths

Dr. Harry J. Jones, 86, who practiced medicine in eastern Iowa for more than 60 years, died suddenly at his home on Tuesday morning, April 16. A 1904 graduate of the U. of I. College of Medicine, he practiced at North English for 13 years and then, following military service in World War I, practiced in Cedar Rapids. He was a Life Member of the Iowa Medical Society.

Dr. Martin Van Patten, 57, died at Lutheran Hospital, Fort Dodge, on April 30, where he had been a patient for about a week. He was a graduate of Grinnell College and the U. of I. College of Medicine, and was a member of the American Academy of General Practice.

Dr. Aloysius A. Blum, 67, who had practiced at Wall Lake for 31 years and elsewhere in Iowa for 10 years previous to that, died unexpectedly at St. Anthony Hospital, in Carroll, on April 26, just 24 hours after being admitted as a patient there. He suffered a series of heart attacks.



The Doctor's Business

(Continued from page 622)

receivable were closed in an existing partnership in an effort to distribute the income of the old and new partners accurately. A large number of errors were later found to have occurred as results of the difficulties in handling partial payments and apportioning payments between the old and new partners.

In any partnership or associate arrangement, the general philosophies and goals of the doctors should be compatible. The question of how large to grow can result in differences of opinion between partners. There are many who question the advantages of permitting a single-specialty or general-practice group to grow large. In multi-specialty groups the physicians added should fill specific needs in rounding out the group, and should complement the present members. When an overworked solo physician adds a young associate, the experience of the senior combined with the current training of the associate can often contribute to improved medical services. Likewise the expansion of an existing partnership can result in efficiencies and improved services. The fact remains, however, that there are still many solo practitioners maintaining efficient practices, and many patients who prefer that type of medical service.

Ideally, the best reason for partnership and group practice is the combining of professional resources and talents for the more effective practice of medicine. Government studies are said to indicate that in *all* cases group practice is more effective or efficient, but the question remains debatable, and is in fact being debated all over the country.

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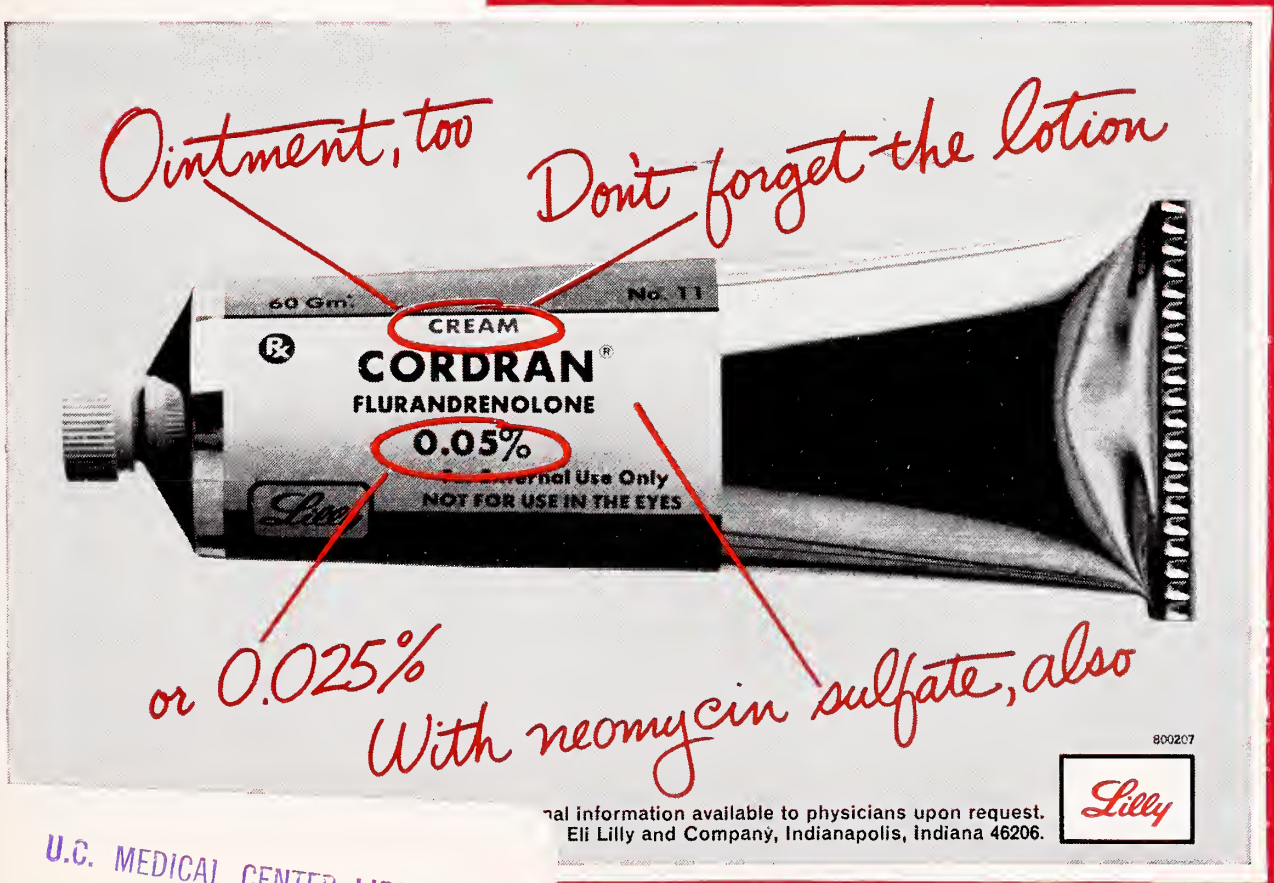
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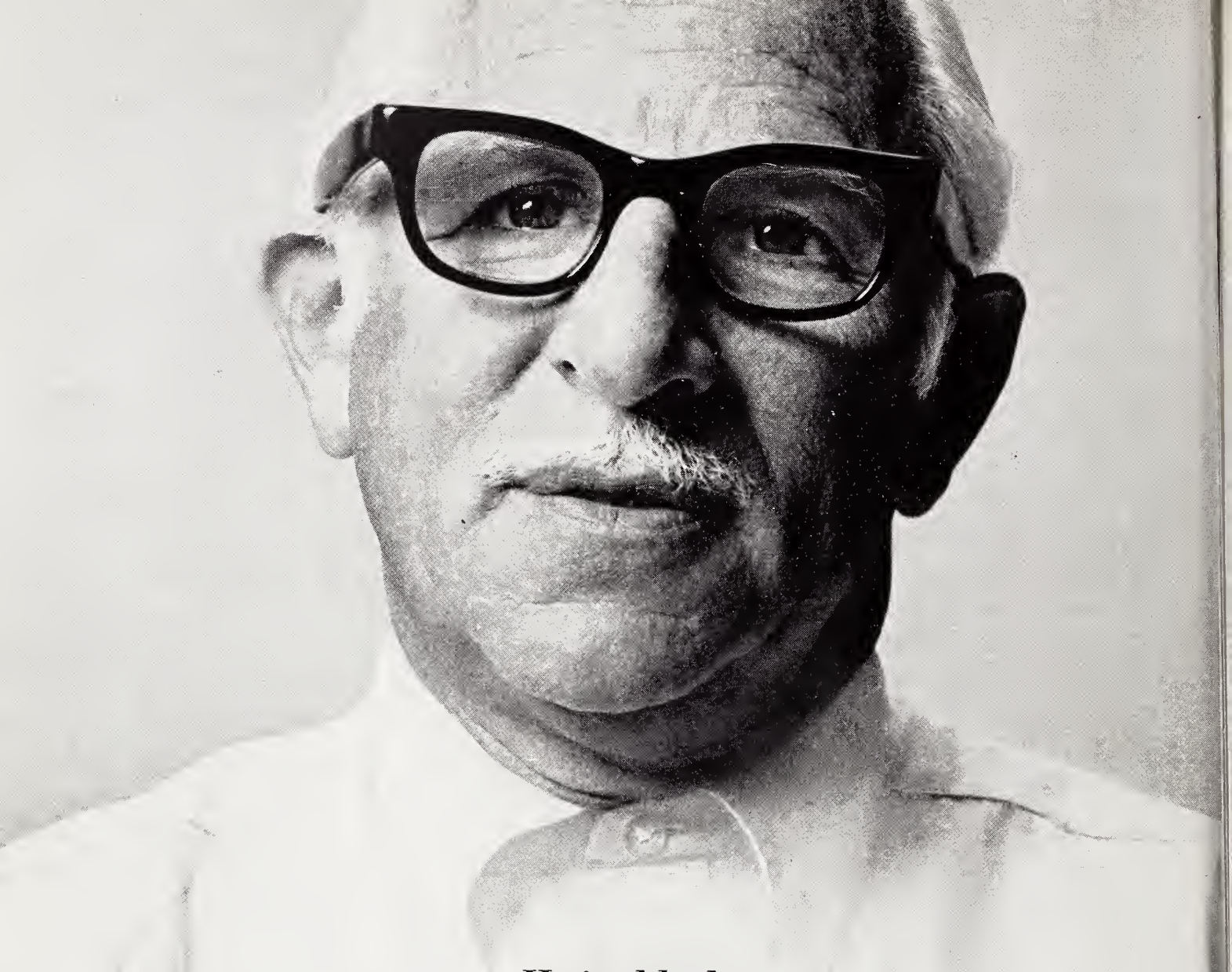
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- Personality Factors in the Performance of Dialysis Patients—A. S. Norris, M.D.
- The Social Security Disability Program—Homer E. Wichern, M.D.
- U. of I. Clinical Pathologic Conference No. 492—Chest Pain, Cholecystectomy, Shock, Hepatomegaly
- University Hospitals Drug Letter: Drugs in Pregnancy
- Minutes of the 1968 Sessions of the IMS House of Delegates



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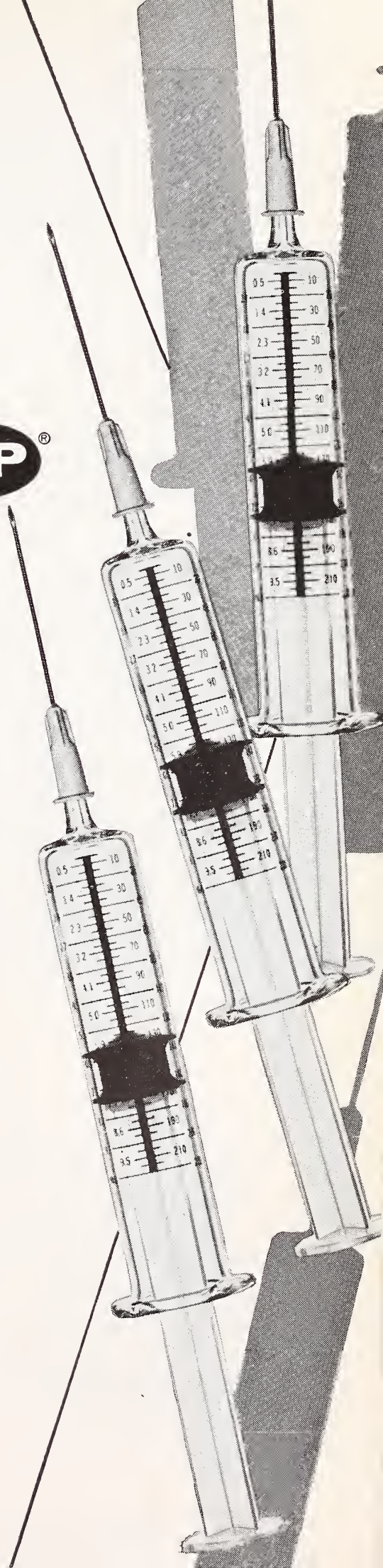
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The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVIII July, 1968 No. 7

CONTENTS

Presidential Address: American Medicine Indicted —A Defense
Richard F. Birge, M.D., Des Moines 665

SCIENTIFIC ARTICLES

Personality Factors in the Performance of Dialysis Patients
A. S. Norris, M.D., Iowa City 671

The Social Security Disability Program
Homer E. Wichern, M.D., Des Moines . . . 675

University of Iowa College of Medicine Clinical Pathologic Conference No. 492 (Chest Pain, Cholecystectomy, Shock, Hepatomegaly) 678

EDITORIALS

Desegregation? 693

Hearing Aids and Hearing-Aid Dealers . . . 693

Hypospadias 695

Antihypertensive Actions of Diuretics 697

Antimetabolites in the Treatment of Psoriasis . 698

SPECIAL DEPARTMENTS

The Month in Washington 658

Coming Meetings 662

President's Page 692

Letter to the Editor 696

Medical Ethics: Recent Opinions of the AMA Judicial Council 700

In the Public Interest facing page 702

University Hospitals Drug Letter: Drugs in Pregnancy 704

Iowa Association of Medical Assistants . . . 707

Woman's Auxiliary News 710

State Department of Health 713

Minutes of the 1968 Sessions of the IMS House of Delegates 719

Fifty Year Club Members 786

County Society Officers 788

Officers and Committees, IMS, 1968-1969 . . . 789

Index to the Minutes of the 1968 IMS House of Delegates 792

Personals 794

Deaths 806

MISCELLANEOUS

Report of the 1968 Physicians' Golf Tournament . 669

Rehabilitation Center for Emphysema Patients . 677

New Residency Programs in Omaha 677

Experiments Discredit "Empty Stomach" Eating-Athletic Performance Concept 691

Lawnmower Accident Reports Requested . . . 702

Exercises for Maintaining Joint Mobility . . . 715

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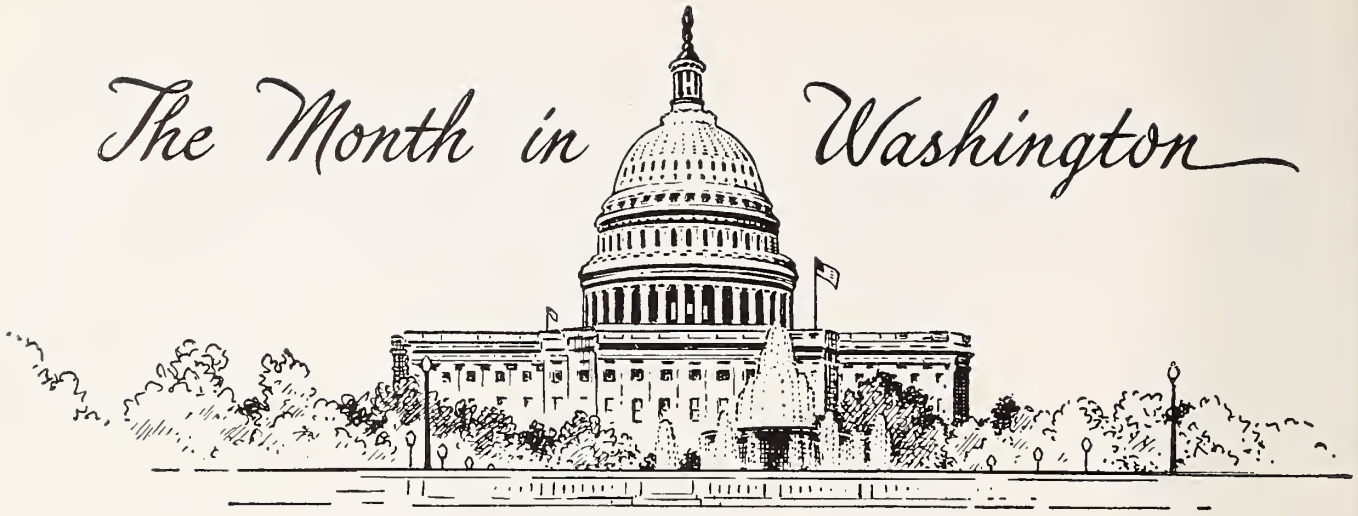
Indications: Infections susceptible to oral penicillin G: prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.
Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
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The Month in Washington



Washington, D. C.—The American College of Radiology, defending the current use of x-rays by physicians, criticized published scare stories for causing unwarranted fears of x-ray examinations.

Dr. Richard H. Chamberlain, a spokesman for the college, said such articles as one in a recent issue of the LADIES' HOME JOURNAL distorted the facts in such a manner that it added up to "one of the most tragic things in medicine" by scaring people as to the possible effects of being x-rayed. Dr. Chamberlain said usage of x-rays by physicians in this country is "remarkably good."

"The risks to patients in the performance of medical x-ray examinations are vanishingly small," he said. "Diagnostic x-ray examinations do not endanger the health of patients, despite a few shrill claims to the contrary. We could cite millions of instances where x-ray examinations provide life-saving information to patients."

In testimony before the Senate Commerce Committee, the College supported a radiation-standards bill, proposed after reports of radiation leaks from color television sets. "The public has the right to expect protection against harmful amounts of inadvertent exposure to radiation from the operation of electronic devices." Dr. Chamberlain said.

He added that much more is known today about the effects of radiation than about many other environmental contaminants. Although more needs to be learned about the effects of low levels of radiation, he said, "We do know with assurance that their potential for harm is very small. The real tragedy occurs when even a single person may be misled by a distortion of radiation hazards to refuse a needed diagnostic x-ray examination."

* * *

The Food and Drug Administration (FDA) has proposed new regulations for the classification of drugs found both safe and effective for their labeled uses in a survey of more than 3,600 prescription drugs. The new procedures would open the way to increased competition within the drug industry by allowing firms to market drugs reclassified as "not new" or "no longer new" without submitting and awaiting approval of new drug applications. A manufacturer that gets a new-drug-application approval for a product has the right to market it exclusively. It is in effect an individual company license. Under the terms of the Food, Drug and Cosmetic Act, any medicine can remain in that "new drug" category, regardless of how long it has been on the market.

The new proposal would set up a system for reclassifying the pre-1962 "new drugs" that are being recognized as effective in the drug-efficiency study being conducted for FDA by the National Academy of Sciences-National Research Council. The review, authorized by Congress in 1962, covers 3,690 drugs—every drug marketed in this country between 1938 and 1962. The drugs under review had been approved as "new drugs" solely on the basis of safety.

FDA announced that two drugs—metyrapone and metyrapone ditartrate—would be the first "new drugs" reclassified under the proposal. Both were found effective for their recommended uses of testing the functioning of the pituitary gland. They are manufactured by CIBA Pharmaceutical Co.

In the FDA's second report carrying out recommendations of the study of every drug manufactured in the United States between 1938 and 1962, the manufacturer of a drug that is used in the treatment of severely painful menstruation was ordered to provide evidence within 60 days that its product is effective for the conditions listed in its labeling. The drug, Lutrexin, manufactured by Hynson, Westcott & Dunning, Inc., of Baltimore, is available on prescription only. The FDA also issued a new warning about dangers of the antibiotic drug chloramphenicol.

* * *

Health, Education and Welfare Secretary Wilbur Cohen estimated that the Medicaid program may cost the federal government between $2.5 and

$3 billion in the fiscal year 1971. The estimate for the next fiscal year (1968) is $2.1 billion. The original estimate for the current year was $1.7 billion, but that amount proved substantially low, and the Administration has asked for $500 million more.

Congress has put some restrictions on the Medicaid program, effective July 1, which may result in holding down the 1971 costs below Mr. Cohen's estimate.

The Social Security Administration reported that the Medicare Part B program—physicians' services—operated at a small deficit in fiscal 1967 which will be covered by the increase from $3 to $4 in monthly premiums.

The percentage of people 65 and over enrolled in the doctor-bill insurance part of Medicare went up from 92 to 95 per cent during the six-month open-enrollment period that ended April 1. About 700,000 older people who had missed out on their first chance to enroll signed up between October 1, 1967, and April 1 of this year. Now, 18.6 million of the 19.6 million Americans 65 and over are now enrolled for Medicare "voluntary" medical insurance.

Social Security Commissioner Robert M. Ball said that the overall Social Security fund is in good fiscal condition. Medicare received $3.1 billion in fiscal 1967 and disbursed $2.6 billion, he said. Estimates for the next 25 years he declared, showed that the program "has a favorable actuarial balance—in other words, that total income over the 25 years ahead can be expected to exceed total outgo."

Mr. Cohen told a House appropriations subcommittee that HEW was very much concerned and was making an intensive investigation of reported abuses by some physicians in federal medical programs. He said a number of allegations had been made, but that he would not want to make an overall statement until the investigation was completed. "A typical kind of allegation concerns a doctor who goes into a nursing home—I will be just hypothetical about this—and he is there for an hour and then sends in a bill for an injection of something for every one of 50 people in the institution," Mr. Cohen said.

"Then we have had cases of bills being submitted in which the evidence suggests that the volume of services that he is requesting to be paid for is beyond the ability of a particular person to handle. Well, he comes back to that allegation and says, 'I have a nurse and I have an assistant' and so on. So we have to look into each one of the cases on its merits. We are doing that now.

"The popular criticism usually has to do with the individual fee. I really don't think that is the major issue. The real issue is not so much the fee or the price per unit, but the number of units that the person is saying he delivered."

Cohen said he did not think such practices are

(Continued on page 662)

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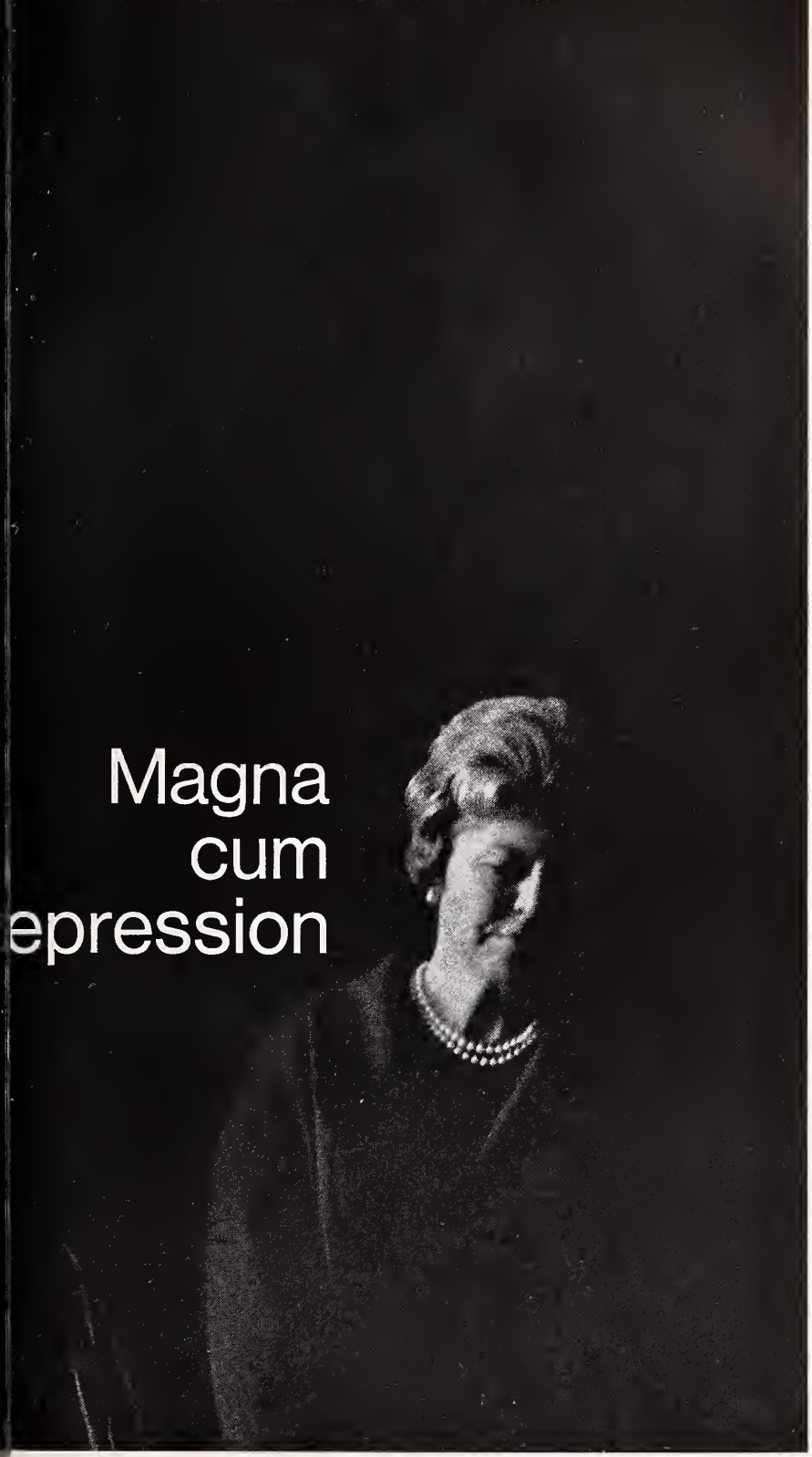
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Warning: Clinical reports have suggested that there may be a risk of teratogenesis associated with the use of this compound during the first trimester of pregnancy. Unless, in the opinion of the prescribing physician, the potential benefits outweigh the possible risks, it should not be used during the first trimester of pregnancy. Cardiovascular complications, including myocardial infarction and arrhythmias, have occasionally occurred in susceptible individuals. Patients with cardiovascular disease should be given the drug only under careful observation and in low dosage.
Precautions: Since suicide is always a possibility in severely depressed patients and one which may persist until significant remission occurs, such patients should be carefully supervised during early treatment. Some severely depressed patients may also require hospitalization and/or concomitant electroconvulsive therapy. Because of its anticholinergic effect, caution should be observed in prescribing the drug for patients with increased intraocular pressure.
In rare instances, transient cardiac arrhythmias have occurred in hyperthyroid patients and in patients r ceiving thyroid medication when this compound was added to the regimen.
Imipramine may block the pharm cologic activity of guanethidine a other related adrenergic neuron- blocking agents.
The drug is not recommended at present time in patients under 12 of age.
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In patients with cardiovascular disease, hyperthyroidism or increased intraocular pressure; in those receiving anticholinergics (including antiparkinsonism agents), thyroid medication or adrenergic neuron-blocking antihypertensive agents; and in those in the first trimester of pregnancy, the precautions discussed in the Prescribing Information should be carefully observed. Although toxic reactions severe enough to require discontinuation of Tofrānil are uncommon, please refer to the Prescribing Information for a description of such instances when discontinuation may be necessary.

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orary discontinuation of the drug,
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lepression including agranulocy-
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ding photosensitization, eosino-
a, and mild withdrawal symptoms
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A lag in therapeutic response, lasting from a few days to a few weeks, should be expected. When dosage recommendations are already being followed, increasing the dosage does not normally shorten this latency period and may increase the incidence of adverse reactions.
Availability: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration.
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widespread but that: "We have enough to be very much concerned about it."

* * *

A preliminary injunction was issued to halt the sale of a diathermy device distributed by the Diapulse Corporation of America. The U. S. District Court for the Eastern District of New York, enjoined sales of the Diapulse device advertised for treatment of 49 diseases and conditions, including tuberculosis, typhoid fever, staph infections and gangrene.

The diapulse device was seized by FDA in 1965, and a federal court in Hartford found it to be misbranded on March 17, 1967, but the sale of the machine continued, pending further appeals.

* * *

A group of physiicans specializing in child health has endorsed a bill to require special safety containers for drugs, soaps and other household products that are involved in the poisoning of 500,000 children each year.

The Accidental Poisoning Committee of the American Academy of Pediatrics endorsed the measure sponsored by Chairman Warren G. Magnuson, D-Wash., of the Senate Commerce Committee. The Academy, in a letter to Magnuson, said the bill was "the only practical way to eliminate hazards from drugs and household products."

The government announced a ban on interstate shipments of household products containing carbon tetrachloride—a substance used in some cleaning fluids. The Food and Drug Administration said use of the chemical in a home constitutes a hazard to public health, and added there are many safe substitutes available. According to the FDA, carbon tetrachloride can be fatal if the fumes are inhaled. The chemical can also cause damage to the liver, kidneys, brain and nervous system, the agency said.

COMING MEETINGS

IN STATE

July 23-26 **American Society of Pharmacognosy, University of Iowa College of Medicine,** Iowa City.

CONTINENTAL U. S.

July 8-11 **Postgraduate Course in Ophthalmology sponsored by University of Colorado School of Medicine,** Estes Park, Colorado.

July 15-18 **Medical Record Librarian Conference sponsored by University of Colorado School of Medicine,** Estes Park, Colorado.

July 21-27 **Fourteenth Annual General Practice Review sponsored by University of Colorado School of Medicine,** Denver.

July 22-24 **9th American Medical Association Air Pollution Medical Research Conference,** Denver-Hilton Hotel, Denver.

July 22-25 **Ruidoso Summer Clinic (11th annual) sponsored by New Mexico Chapter of American Academy of General Practice,** Chaparral Motel, Ruidoso, New Mexico.

July 31-Aug. 1 **Postgraduate Medical Assembly of South Texas,** Shamrock-Hilton, Houston.

Aug. 1-3 **Postgraduate course in Dermatology sponsored by University of Colorado School of Medicine,** Aspen.

Aug. 5-8 **Postgraduate Course in Pediatrics, University of Colorado School of Medicine,** Aspen.

Aug. 11-15 **National Medical Association,** Shamrock-Hilton, Houston.

Aug. 12-16 **Postgraduate Course in Internal Medicine, University of Colorado School of Medicine,** Estes Park.

Aug. 15-17 **Rocky Mountain Radiological Society,** Brown Palace Hotel, Denver.

Aug. 15-17 **Big Sky Medical Pow Wow sponsored by Cascade Medical Society,** College of Great Falls Campus, Great Falls, Montana.

Aug. 18-20 **American Society for Pharmacology and Experimental Therapeutics, University of Minnesota,** Minneapolis.

Aug. 22-24 **West Virginia State Medical Association,** Greenbrier, White Sulphur Springs, West Virginia.

Aug. 22-24 **Cancer Chemotherapy '68, Eighth Annual National Cancer Conference sponsored by University of Wisconsin Medical School,** Park Motor Inn, Madison.

Aug. 22-24 **Workshop Entitled, Exercise as a Therapeutic Tool in Coronary Heart Disease, sponsored by University of Wisconsin Medical Center and Department of Physical Education,** Madison.

Aug. 24-29 **8th International Congress of Gerontology,** Sheraton Park and Shoreham Hotels, Washington, D. C. and Baltimore.

Aug. 25-30 **Flying Physicians Association,** Tan-Tar-A, Osage Beach, Missouri.

Aug. 27-30 **Wyoming State Medical Society,** Jackson Lake Lodge, Moran.

ABROAD

Aug. 5-10 **22nd Assembly of World Medical Association,** Sydney, Australia.

Aug. 5-10 **Asia-Pacific Academy of Opthalmology, (3rd) Congress,** Singapore.

Aug. 12-17 **International Congress on Mental Health,** London.

Aug. 19-28 **International Genetic Congress,** Tokyo.

Aug. 26-29 **Second Western Hemisphere Nutrition Congress (Co-sponsors: American Institute of Nutrition; Latin American Nutrition Society; Nutrition Society of Canada),** Americana Hotel, San Juan, Puerto Rico.

Aug. 31-Sept. 8 **International Symposium and Seminar on Cerebral Palsy,** Hong Kong.

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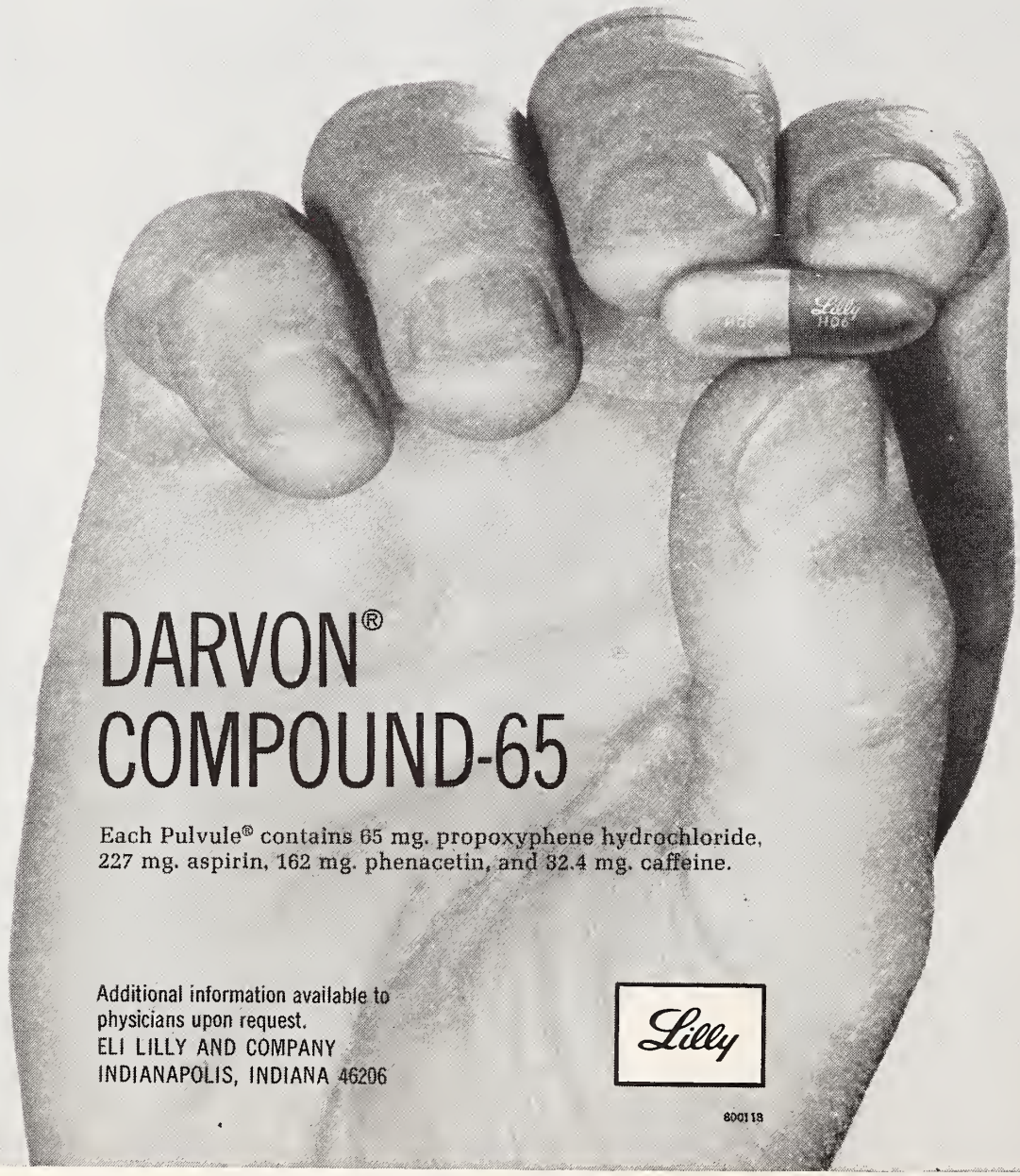
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Presidential Address

American Medicine Indicted—A Defense

RICHARD F. BIRGE, M.D.
Des Moines

Once upon a time a young man who lived in a far away land graduated from medical school.

A vast part of this physician's country was a desert. Although journeys across the desert were extremely hazardous, there was no other access to the great seaport. Hence the desert was much traveled by his countrymen.

Being of adventurous nature the young physician decided to cross the desert, himself, to see the great seaport before settling down to the practice of medicine. Far out in the desert he lost his way. Exhausted and out of water, he eventually came upon an unknown oasis.

Grateful that his life had been miraculously spared, he resolved that should he ever find his way back to civilization he would again return to this oasis. Here he would live and practice his profession, for many of his countrymen's lives had been lost in the desert from deprivation or illness with no physician available to aid them.

A compassionate Power showed him the way to the great coastal city, wherefrom he returned to the oasis with supplies of food and medical equipment.

The desert doctor was surprisingly busy and happy in his isolated practice. He was loved and respected by all who knew him.

Many years passed. Then one day a special guest arrived at the oasis and expressed great interest in the desert doctor's work. This visiting physician told of his great country, the United States of America, and of the huge complex of medical institutions operated by his government. He related that in his country all of the people are entitled to all the health care they desire at federal expense. Each American, he related, is assigned to a regional Clinic, where he may report any time between 9 o'clock in the morning and three o'clock in the afternoon, Monday through Friday.

"Many years ago I was told that each American has his own doctor," marvelled the desert doctor.

"That was true in the old days," was the reply, "but all that has been changed. We no longer practice alone as you do, but instead strive for efficiency. We work together in large integrated groups in centers built and operated by our government. To these centers patients come from large surrounding areas. No one needs a private physician."

"I serve my patients as they need me," said the desert doctor. "If there are many, I work until I have taken care of them. If there are few, then I may study, smoke my pipe, or rest."

"Well," said the American, "we have found a good way of life. We have much automated equipment. We have many assistants to help us. We work hard—a full six hours daily, Monday through Friday. Between times we are free. Those patients we cannot see today may keep their numbers and be first in line tomorrow. It is better for them to wait, for then we are able to give each one of them five minutes of individual attention."

"What if tomorrow is Saturday?"

"Monday is not far away!"

"What about emergencies?"

"There are very few who cannot wait."

"But what of the few who cannot?"

"Our Emergency Aid Corpsmen look after them."

The next day as his visitor was ready to depart, the desert physician said to him: "It certainly must be wonderful to practice medicine in the United States. However, I like my way. Although I'm growing old and tired in the practice of medicine, I am sustained, for in my heart dwells compassion for the unfortunate and the sick. To do all I know how for one who is my *own* patient is for me reward beyond comparison.

"Young man, I suggest that when you return to America you tell everyone how wonderful it is for a doctor to have a place to practice where, without either help or interference from his government, he can freely dedicate himself to his life's work."

Sadly, the American replied: "Your oasis may be the last place on earth where that is possible!"

WHAT'S SO WRONG WITH OUR WAY OF PRACTICE?

What do you think of the two physicians in my story?

The self-sufficient desert physician prided himself on taking care of his own patients as best he knew how. Was this not good medical practice? Or was he a "horse and buggy" doctor with an antiquated approach to patient care? If so, would you say the same of rural Iowa family physicians?

What about the American doctor? Had he sold his professional birthright to gain the bewitching enticements of an easy life?

Has the day arrived when physicians working alone, in two- or three-man groups, or in small clinics can no longer provide their patients good medical services? This I do not for one minute believe!

Our way of practice is based upon a firm foun-

dation—the relationship of a doctor to his patient.

Upon that foundation American medicine has built a marvelously integrated, flexible system of medical service—one of the best if not the very best that has ever existed.

With the aid of modern means of communication and transportation, the physician affords that amount of medical service which the problem of each individual patient calls for, because he has available to him a choice of consultants and medical centers—consultants with whom he may discuss a case or to whom he may refer a patient—and medical centers where he may send a patient for diagnosis or management when a problem is beyond his ken.

If his patient needs hospitalization, a nearby hospital where he holds staff privileges is available. As an alternative, he and his patient may select one of several larger hospitals in his area where special consultative services and facilities are available.

Many have lost sight of the fact that there is economy of both time and money in this approach to medical practice. Each physician is able to spend as much or as little time as he in his judgment deems indicated to meet the needs of each one of his patients.

When consultation is *not* needed, it is not forced upon the patient, nor is the patient with a minor complaint passed along from department to department of a medical center, sometimes spending hours or days just waiting.

The American way of medical practice enables the physician to maintain high professional standards, and to live up to his professional ideals.

We must preserve this professional integrity of ours by insisting that we shall care for our patients in accordance with the dictates of our individual medical judgment.

We must *never* turn over the control of patient care to others.

WHAT PRICE FOR A GOOD PRODUCT?

Those who would take over control of patient care charge that our way is not only inefficient because it is not "organized," but that it is also exceptionally costly.

I have just pointed out how our modern integrated, coordinated system of medical practice works to the benefit of the patient. Let us, then, inquire about the cost of his medical care.

Don Derry, executive secretary of the Colorado Medical Society, in speaking at the 1965 Public Relations Institute of the American Medical Association clearly set forth some simple facts regarding the cost of medical care. He pointed out that because wage increases have outstripped medical care prices, the cost of medical care in terms of hours of work needed to purchase it is less for the factory worker today than it was 20 years ago—about 16 per cent less, overall.

A factory worker can earn a given amount of a physician's services in 24 per cent less time today than he could 20 years ago.

Whereas about six cents out of every dollar the American people spend goes grudgingly for medical care, Mr. Derry found that we spend far more for tobacco, alcohol, and recreation.

He concluded: "There isn't any doubt that the American people today are getting more for their health dollar than they did 20 years ago."

Americans have always been willing to pay a reasonable price for a good product, rather than less for a shabby product. American medicine is a good product, costing what it is worth, and no more.

WHAT PRICE MEDIOCRITY?

Historically, physicians have heeded that fundamental principle of medical ethics which states, in essential part: "The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration."

I am well acquainted with many physicians, and I know that despite allegations to the contrary they live up to this principle of ethics. They are, like the desert doctor in my story, compassionate men and women.

The crucial economic issue that we are faced with is *not* the *cost* of care to the patient. It is *control* of distribution of the health care dollar.

There has sprung up in our land a vast enterprise, the so-called "health care industry." This enterprise involves not merely the personal services of physicians, but also total patient care in hospitals, nursing homes and other institutions; governmental services—military, public health, and so forth; the education and training of physisians, other professional people, and paramedical personnel; the pursuit of numerous research projects; huge capital investments in hospitals, medical schools and other facilities; and the production and sale of vast quantities of equipment, supplies and services by numerous large and small businesses.

The "health care industry"—how I dislike the term!—is a tremendous financial enterprise, heavily capitalized, larger than the automobile industry. It is an enterprise which tends to submerge the physician by its very enormity.

FORBES, a widely-read business magazine, published an article on March 15, 1968, entitled, "Move Over, Doc." The article begins: " 'Health care is now too big to be left to the doctor.' So says Richard Guttmacher, executive vice-president of . . . a biology testing lab in Washington, D. C." The article describes the interests that several large firms hold or are developing as they expand their businesses to encompass the medical field. Most such firms are serving us well. A few have embarked upon the corporate practice of medicine.

Granted that industry wants a piece of the health care pie, but it is government that intends

to cut the pie. If bureaucrats can fund all health care services, and *pay* doctors directly for taking care of the people, the vast political control they will gain is immeasurable.

We must presume that those who would change the American way of medical practice in order to "reduce the cost of medical care" are not dishonest, selfish or merely politically ambitious. They are dedicated people. They are plausible people.

They are also misguided people. They seem unable to comprehend that governmental operation of a service or industry ultimately becomes tremendously costly, cumbersome, and inefficient.

Although they are learning that America's something-for-everybody Medicare program is costly, cumbersome and inefficient, they are confident that the legislative controls they seek will bring economy and efficiency out of the chaos they have helped create.

What these planners in fact call for is a cheap product. Seeking economy, they plan to put a ceiling on the price of medical care. They will, if they prevail, first put the physician on a fixed fee schedule and later abrogate fee-for-service compensation altogether. Their initial objective achieved, they plan to offer "better" medical care to all of the people for "reasonable" cost.

In our inflationary environment, what in effect they proffer is mediocre medical service, ever deteriorating. Look at Great Britain!

GROUP PRACTICE, HEW STYLE

Perusal of a publication entitled "Promoting the Group Practice of Medicine" reveals wherein our real problem lies. It is a report of the National Conference on Group Practice that was held last October in Chicago, Illinois.

In medical lexicon, the term "group practice" is generally understood to mean a group of physicians—either in a multi-specialty or single specialty situation—working together as partners or as associates and sharing facilities, yet representing in every way the traditional private practice of medicine.

In contrast to our interpretation of group practice, social planners are vigorously touting a totally different concept under the same name. It's a system of regimentation long known to us as "closed-panel" medicine.

In the form of a labor-and-management-controlled, prepaid plan, closed-panel medical practice has existed for some time, but its growth over the past 15 years has been minimal.

Seventeen states including Iowa, prohibit this kind of medical-care delivery.

The National Conference on Group Practice was called by John W. Gardner, then Secretary of the Department of Health, Education and Welfare, in order "to improve the delivery of health services and to counter the rising cost of medical care." It brought together nearly 150 participants, "all experts in group practice," all having a common goal of "promotion of group practice as the optimum method of organizing our health manpower and resources to provide high quality care for our nation's population."

A BLUE BLUEPRINT

The Conference served as a vehicle for setting forth and propagandizing a blueprint of the program of the Department of Health, Education and Welfare for meeting "the current crisis in organization." One may presume that the blueprint was well conceived prior to the Conference. Witness the fact that the Conference director, John W. Cashman, M.D., Director of the Division of Medical Care Administration of HEW, stated shortly after reports of study groups had been received: "This Conference is to lead to action, and describing that *blueprint* is my exciting task this morning."

Dr. Cashman's report to the Conference, entitled "A Blueprint for Action," included the following interesting statements:

"Some concrete recommendations to the federal government were to expand the Hill-Burton program to encourage group practice."

"The federal government could use the power of its prestige and its financial leverage to further the enactment by the states of model laws which would serve the group practice movement in the same way that Blue Cross was assisted in the 30's and 40's."

"Remaining state and local legislative barriers preventing consumer-sponsored prepaid group practice should be removed, and positive legislation such as the expansion of HUD to provide loans and grants to promote and expand group practice should be promoted."

"Tax rulings by the Internal Revenue Service which place medical groups at a disadvantage should be reviewed and altered if warranted."

"Hospitals which discriminate against physicians because of their participation in a group, even when the physicians are otherwise fully qualified, should be denied federal reimbursement under the Title 18 or other federal care programs as well as under Hill-Harris funds."

"Federal and state governments and insurance carriers, increasingly aware of the high cost of poor-quality care, should foster the use of group practice plans."

"Involving the consumer in the direction of health programs was coupled with recognition of the catalytic effect a labor-management partnership would contribute to the development of mechanisms to foster group practice."

Dr. Cashman proceeded to detail eight "imaginative suggestions" of the Conference study groups:

"1. The provision of federal subsidy for major prepayment group-practice plans, to allow expansion of facilities and services.

"2. Training of personnel specifically for use in developing new plans.

"3. Provision of required capital and operating funds for the creation of new plans.

"4. Encouragement of major insurance companies to include provision of loans for group-practice expansion and development.

"5. Use of the OEO neighborhood-health-center concept as a method for expanding group practice, integrated where feasible with existing or new community group-practice plans.

"6. Further use of the retainer mechanism (e.g., non-fee and non-capitation payment) to encourage simplification of payment and to permit flexible, medically acceptable cost reimbursement for the establishment and development of groups.

"7. The combination of Title 18 and 19 payments, on a capitation basis, for Medicare beneficiaries who elect to use hospital-based physicians organized as a group practice.

"8. Giving to Blue Cross, Blue Shield and commercial insurance subscribers three choices among plans offering indemnification, capitation, and intermediate-retainer payment so that groups may be developed under each method."

Dr. Cashman concluded: "As a final note . . . three items stand out: the need for technical aid, the need for financial aid of one type or another, and lastly, the need for the federal government to speak up loud and clear."

INDICTMENT BY INNUENDO

The Conference report also includes many statements considered undebatable for the purposes of the Conference. Witness the following quotations from remarks of William H. Stewart, M.D., surgeon general of the Public Health Service of the U. S. Department of Health, Education and Welfare:

"The present crisis of unfulfilled health needs in the United States is essentially a crisis of *organization.*"

"We have solid evidence that widespread adoption of group practice would help to solve some of our deepest and most pervasive problems."

"I believe that the American people are now asking the question loud and clear. They want to know when and how they shall receive better health care at prices they can afford to pay."

What do we private practitioners do to set the record straight when such unqualified indictments of American medicine are heard?

Too often, nothing!

All too often our critics entice us into debates on issues as *they* define them.

We are prone to debate these challenges on the assumption of their validity, because self-discipline and self-criticism are second nature to us. But let us remember that the challenges we are speaking of come mainly from those who don't practice medicine—from impractical men who wish to bring "organization" out of what they believe to be a chaotic system of practice, because they don't understand what we do.

As I have shown you, these people would bring organization out of alleged disorganization through transition to a panel system of federally approved, integrated and regulated clinics and groups, wherein doctors work but no longer control their own destinies.

We cannot afford to be trapped into assuming such defensive positions. We must let it be known that we have many positive plans and programs for meeting the problems of a changing world.

We must make it clear to people that as professional men and women we clearly recognize and gladly assume our responsibilities. We well know that there is always a better way to do almost anything. Advancement of our knowledge and technics is our daily way of life.

We recognize the shortage of medical and paramedical personnel that exists. But the problem is by no means a simple matter of numbers. I doubt that we shall ever produce enough skilled personnel to satiate those who are chasing the fountain of youth with free federal dollars.

We have taken the lead in Iowa in the quest for more adequate medical manpower. We are resolved to define our problems in this area, and we intend to find the best possible answers to them.

We also know that it is very expensive to build and equip modern medical facilities such as medical schools and hospitals, and that unnecessary duplication of facilities and equipment may sometimes be financially foolhardy. Again, we are striving to integrate our efforts at expanding medical facilities.

I would postulate that as long as we work together in such ways, keeping our free-enterprise approach to the practice of medicine operative, we shall afford our patients ever better medical service. Our system of medical practice has tremendous flexibility and marvelous capacity for adaptation to, and adoption of, new information and technology.

Does anyone doubt this? If so, let him ask to what country do physicians from all over the world come for postgraduate medical education? Is it to one of those many nations where medical practice is governmentally operated and controlled? Or is it to that nation where the fruits of endeavor of physicians and their many colleagues excel the advances of all the other professions, and at least equal that of our most progressive American business enterprises?

Shall we let people destroy what we have built up through the years?

If we deem our way important to the welfare of our patients, what shall we do to stem the organized efforts to subjugate us?

Fortunately, we have one thing in our favor. People *do* respect physicians.

If people respect us, they will at least listen to us.

If we can get the people to listen to us, they will believe us, because our goal is better medical service to them.

American medicine needs to take its story to the people in a positive way!

We need to communicate with the people!

First of all, however, we must improve and strengthen communications with one another. We must continue to work together. And above all, we must remain unified.

The key to unity is understanding. In order to survive we must keep well informed by discussing our mutual problems frequently with one another, and with well-selected, strong leaders.

Active participation by each physician in the work of organized medicine is the order of the day.

AMERICAN MEDICINE NEEDS A SPOKESMAN

Having achieved unity, we must speak with one voice.

On June 17, 1967, the news commentator Paul Harvey, in speaking to the Conference of State Medical Society Presidents and other Officers, laid it on the line when he warned: "For most of two decades, the doctor has been losing his voice." "Big steel has a spokesman; so do the steel workers." "Someone representing medical interests must answer headline indictments with equal boldness."

Harvey charged that there has been inadequate liaison between the profession and the public. Modern medicine, he declared, has had no effective voice in many sensitive areas. He lamented the fact that news analysts find it necessary to turn to governmental officials, such as, for example, the USPHS Surgeon General, as the "last word" on matters in the health field, not knowing where else to seek information. He pointed out that however capable these individuals may be, they are bureaucrats and must necessarily parrot the party line of the incumbent political administration.

In a spirit of high regard for the medical profession Mr. Harvey urged "that the American Medical Association again figure out some way to effectively speak through some one with one voice."

Because it seems to me that we cannot afford to ignore the challenge expressed so clearly by Mr. Harvey, I indicated in my final President's Page my desire to have the House of Delegates of the Iowa Medical Society give attention to this vocal void. Therefore, I have submitted to the House of Delegates for its review a resolution recommending that the AMA be called upon to clearly establish the authority of appropriate official AMA spokesmen to speak out promptly and forcefully on the important medical issues of the day, to the end that the private practice of medicine will strengthen its position with the public and will overcome those who would seek to divide or destroy the profession.

Report of the 1968 Physicians' Golf Tournament

At the golf tournament played on Sunday, April 28, 1968, the first day of this year's IMS Annual Meeting, 24 doctors competed.

Sixteen physicians were present at the dinner and awarding of prizes which had been donated by the following firms: Physicians and Hospitals Supply Co., Geigy Pharmaceuticals, Merck, Sharp & Dohme, Mead Johnson Company, CIBA Pharmaceutical Company, The Upjohn Company, Abbott Laboratories, Picker X-ray Midwest, Inc., Pepsico, Inc., Robinson Wholesale, Newburn's Men's Shop, King's Pharmacy, Hammer's Drugs, Sipes' Pharmacy, Walgreen Drugs, Katz Drugs, and Ford-Hopkins Drugs. Whylie-Farrell Opticians furnished help and "cordial room," and a cup for the best score.

Dr. Rodman Smith, of Red Oak, won the cup with a par 73. Other respectable scores were the 77's of Dr. William Catalona, of Muscatine, and Dr. Charles Fee, of Denison; the 78 carded by Dr. C. F. Watson, of Fairfield, and the 79 reported by Dr. John Polich, of Des Moines. The others got a lot of exercise by taking up to 108 strokes.

Thanks for the courtesy of all participants.

—HAROLD J. MCCOY, M.D., *Chairman*

University of Colorado School of Medicine

General Practice Review

July 21-27

The July presentation of the Fourteenth Annual General Practice Review will be similar in course content and format to last January's program. One day will be devoted to each of six major fields of practice. Physicians who do not wish to attend the entire course may register for selected days. All sessions (except Sunday) will be held in the Humphreys Postgraduate Center, which occupies the third floor of the Denison Library Building. The fee is $75, or $15 per day, plus a non-refundable advance-registration fee of $10.

The Sunday program, at the Cosmopolitan Hotel, is to concern alcohol and drug abuse. On Monday the presentations will be in the area of medicine; on Tuesday, pediatrics; on Wednesday, dermatology; on Thursday, surgery; on Friday, obstetrics and gynecology; and on Saturday, trauma.

The Central City Opera Festival this summer features the D'Oyly Carte Opera Company. On Tuesday, Wednesday and Thursday evenings of the General Practice Review week the production will be Gilbert and Sullivan's "Pirates of Penzance." Tickets are $6.75 each, and they may be ordered on the application form. The deadline for receipt of ticket orders is July 5.

Open-eyed nights





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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in: skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders; athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindications: Known hypersensitivity to drug; children under 6 months of age; acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in treatment of psychotic patients, and should not be employed in lieu of appropriate treatment. As with most CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may also be associated with temporary increase in frequency and/or severity of seizures. Advise patients against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance. Keep addiction-prone individuals (such as drug addicts or alcoholics) under careful surveillance because of their predisposition to habituation and dependence. Use of any drug in pregnancy, lactation or in women of childbearing age requires that potential benefit be weighed against possible hazard.

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Adverse Reactions: Side effects most commonly reported: drowsiness, fatigue and ataxia. Infrequently encountered: confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo and blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported; should these occur, use of the drug should be discontinued. Because of isolated reports of neutropenia and jaundice, periodic blood counts and liver function tests are advisable during long-term therapy. Minor changes in EEG patterns (low-voltage fast activity) observed during and after therapy and are of no known significance.

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Scientific Articles

Personality Factors in

The Performance of Dialysis Patients

A. S. NORRIS, M.D.
Iowa City

THE FIRST ARTIFICIAL KIDNEY was invented in 1947,[1] but it was only with the development of the plastic arteriovenous shunt in 1960[2] that chronic intermittent hemodialysis became feasible and offered the first hope of lengthened life for patients with terminal uremia. Since then, the efficacy of dialysis has been demonstrated on hundreds of patients, but it remains a highly complex and imperfect procedure, demanding much of the professional staff and of the patients.

It is the purpose of this paper to examine the demands that dialysis makes upon patients and their responses to them, to consider the relevance of the responses as regards selection of patients, and to suggest methods that may improve the patients' adaptation.

The patient with terminal uremia begins his career as a dialysis patient with the implantation of an arteriovenous shunt into a vein and artery in a leg or arm. It constitutes his lifeline, and he must guard it with care, avoid damage to it and keep it clean. If he is careless and his shunt becomes infected, a new one must be implanted in another site. Even with care, infection may occur. Clotting is an ever-present possibility that also may necessitate implanting a new shunt.

He can live at home, but he must return to the hospital twice a week and be connected to a machine that impersonally and noisily cleans his blood for 12 to 16 hours. During that time he must lie quietly on the bed, no matter how restless he may become. In addition he must follow a rigid diet, must have his blood chemistry checked frequently, and requires various medications and intermittent blood transfusions.

In many instances he must move to a new residence within commuting distance of the hospital. He may have to change jobs because of that move and/or because of his inability to meet the demands of his former occupation. This is particularly true of those whose work has been physically demanding. His wife will need to perform many chores that formerly were his, and often she must return to work to provide or supplement the family income. He may have to give up old forms of recreation such as hunting, and restrain himself in his play with his children. He must adopt a much less active and often—to his way of thinking—a less important role in the family.

However cooperative he may be while on dialysis, he will still have to endure periods of extreme restlessness and severe headaches. He will frequently have chronic insomnia. He will lose weight and become fatigued easily. He

Dr. Norris, a professor of psychiatry at the U. of I. College of Medicine, made this presentation at the annual meeting of the American Psychiatric Association, in Detroit in May, 1967.

may develop a disabling neuropathy. Despite all he can do as a patient, and despite all his physicians can do for him, he still may die.

Under these circumstances, it is not surprising that many psychiatric complications have been reported.[3, 4] In recognition of the demands of a dialysis program, most workers have commented on the necessity of considering personality in patient selection.[3-6] Factors that have been considered important are freedom from intellectual deterioration, emotional stability, stability of the marriage and family, and the absence of severe conflict.[3]

Employing conventional definitions of stability may help us to avoid dialyzing some patients who are almost sure to suffer psychiatric complications, but we must recognize that we are not considering a psychiatric population, and it is doubtful that we can accurately predict the onset of a psychosis or neurosis in these patients, any more than we can in soldiers on a battlefield. It may be useful, however to attend to the personality factors that may help the individual adapt to life as a chronic dialysis patient.

Besides the prolonged life that dialysis provides, we must also be concerned about the quality of that life. If a patient develops a chronic psychosis while on dialysis, it is evident that we have given him little. But how much have we given to the patients who do not develop obvious psychopathology? Who makes the best patient? Who uses his extended life most effectively? Can this knowledge be used, not only for selection but also in helping patients cope with the stresses imposed by dialysis?

The following comments are based on observations made on 15 patients at one dialysis unit in a Veterans Administration Hospital. All were men. I am proposing a personality classification that may be useful in predicting patients' responses to dialysis. Any such classification will utilize many of the adjectives found in a psychiatric nomenclature, but these patients rarely demonstrate deviations to a pathologic degree, and consequently I have avoided psychiatric labels. Prior to their uremia, these patients represented a fair cross-section of American males. In considering their performances before and during dialysis, three major groups emerged: (1) conformist, (2) masculine type, and (3) adaptive type.

THE CONFORMIST

The conformist is characterized by many passive and dependent traits. He describes his life as quite conventional and uneventful. He seldom deals with aggression overtly. He has a good work history, but he is unlikely to have been given any managerial responsibility. His current illness and the impending dialysis are dealt with by denial. He shows little anxiety or depression. He knows little about dialysis and asks no questions about it. His usual response is, "Everything is all right; I'm not worried." Of all the patients, he appears to adapt most easily and willingly to the treatment program.

He may accept the patient role *too* well. He seems to enjoy his dependency. He is less likely than other patients to look for work. He accepts his pension or his wife's wage-earning and seems content.

Case History. The patient is a 28-year-old man. Albumin was noted in his urine when he was discharged from the Army in 1960. His first symptoms of kidney failure occurred in 1961, but he did well until September, 1965, when he developed fatigue, edema and severe headaches. He began dialysis in December, 1965.

As a youngster, in spite of an unstable home he adapted fairly well in school, and he served in the Army for five years without difficulty and received an honorable discharge.

Although he had been on dialysis for several weeks at the time of the examination, he had little understanding of the machine or of his degree of involvement with it. In spite of his physician's explanations to the contrary, he still expressed hope that his kidneys would recover and that the procedure was a temporary expedient. He denied any anxiety about his health or life.

The patient was reticent early in the interview, but later he spoke more easily. He gave no overt evidence of anxiety or depression. He spoke of the future as though he did not have uremia. His plans were quite unaffected by his need for dialysis.

As he continued as a dialysis patient, he remained pleasant and cooperative. He seldom complained of discomfort or inconvenience. He followed his diet and cared for his shunt. Even when he developed a severe neuropathy, he appeared calm and remained cooperative. Finally he died in a series of convulsions.

THE MASCULINE TYPE

This patient is highly individualistic and independent. He has a history of occasional conflict with authority. He tends to flout rules when they don't please him, and he places great value on masculine endeavor. He must demonstrate his strength. He chooses to use action in handling anxiety. He struggles against his illness. He ignores restrictions regarding physical activity or diet. He finds it difficult to acknowledge any limitations as the result of his disease. Yet, though he denies all of those effects, he frequently becomes very restless and is susceptible to depression, as fatigue and symptoms impose restrictions that his doctor could not get him to accept. Resistance to an acceptance of his illness may severely interfere with the physical aspects of treatment, but his very resistance may contribute to his rehabilitation. He will maintain his former work and social patterns, and will remain a productive member of society to the limit of his physical ability.

Case History. The patient is a 37-year-old man who had always led a very active life, including farming, trapping and hunting. Six months before coming to the dialysis unit, he was told that he had uremia and that he would have to diet and avoid heavy work, or he would die. He denied any depression in response to that warning. He felt good when he got home, and despite his doctor's orders he continued to farm actively. He broke his diet almost every day, and he denied any concern about his illness.

He had grown up on a farm, had always worked very hard and had enjoyed working. He often drank with his friends, and when drunk he sometimes got into fights. In military service he had been a paratrooper and had enjoyed jumping. He had often broken minor regulations when he couldn't see the point of them. That tendency had got him into some trouble, but he had received an honorable discharge.

The patient spoke openly and laughed easily. He denied any concern about his illness or about dialysis, but admitted that he did not know what he would do if he could not farm, and tears appeared in his eyes.

He went on the dialysis program. He farmed against orders; he broke his diet continually. If he was pressed too hard about his recalcitrance, he tended to become depressed. He often spoke of a transplant, saying that it was what he was waiting for. He was often very restless, both at home and on dialysis. He maintained far more vigor than one would expect, and only after many months did weight loss and weakness compel him to admit he would have to change his way of living. He has had many transient periods of depression, but slowly he has become a more realistic and cooperative patient.

In spite of his difficulties with the patient role he has worked effectively, and in terms of rehabilitation he has been an outstanding success.

THE ADAPTIVE TYPE

This patient has a past history of success in his job, and often holds a position of responsibility. He has been enthusiastic about his life. He does not use denial, and as a consequence he has more anxiety and depression early in the course of dialysis than do members of the other two groups. Within a short time, however, he begins to cope with those feelings, often manifesting a heightened interest and participation in religion. He usually has considerable information about dialysis. He reads whatever he can find about the procedure, and he asks questions about it. He discusses his feelings frankly. When complications occur he becomes anxious, but he can be reassured easily.

Case History. The patient was seen prior to his acceptance for the dialysis program. He had had symptoms of uremia for about a year. He had stopped farming because of his physician's instructions, and had begun selling life insurance.

He was quite frank about his emotional reactions to uremia. When informed about the short life span he had remaining, before dialysis was considered, he became anxious and depressed, and he cried. He shared his knowledge and his feelings with his wife. He admitted to a great deal of anxiety about the ensuing dialysis experience, but recognized that it was the only course for him. At times during the interview, in discussing some of the details of his illness, he came close to tears, and stated that he was depressed and frightened. Nevertheless he was able to respond to reassurance, and retained his sense of humor. He spoke with enthusiasm about selling insurance, and

was making plans to move into the city where the dialysis is located.

After the patient began dialysis he experienced increased anxiety and depression, but within a few weeks learned to cope with it satisfactorily. He has remained a very cooperative patient, and he recently won a prize for selling the most insurance in his district.

DISCUSSION

This classification does not provide crisp guidelines for the process of selection. The patient who adapts easily to dialysis may be difficult to rehabilitate. The one who does not cooperate with treatment may be the best adjusted socially and economically. Patients in any of these categories can be successful dialysis candidates. It is only when there are extreme manifestations of conformist or masculine traits that one can judge the patient unsuitable.

An awareness of these personality types can provide us with a means of helping the patient attain his optimum both as a patient and as a productive citizen in his new life. We can avoid the growth of dependency in the conformist with an early introduction of a vigorous program of activity and rehabilitation. A high expectation of social functioning by the professional staff and by the patient's family can prevent his adopting the invalid's role. The masculine type will have no difficulty with rehabilitation, but will have some trouble with the role of patient. Restrictions are very difficult for him to accept. Excessive expectations by the professional staff, early in dialysis, may produce only alienation and depression. Eventually he will cooperate, but until that time comes one may have to accept less than an ideal biochemistry and a high incidence of infected shunts. The adaptive type poses no great problem, but even he requires special attention in the form of extra reassurance early in his experience and during his ensuing complications.

The sample has been a small one, and there have been no controls. At present, however, it cannot be otherwise, and one must work with limited information. Yet it is hoped that this classification may provide some useful guidelines, not only in selecting patients, but more importantly in assisting them in shaping more comfortable and useful lives.

ACKNOWLEDGEMENT

This work was done in the Chronic Dialysis Unit at the Veterans Administration Hospital in Iowa City, Iowa. The author thanks Dr. R. Lawton, Dr. R. Freeman and Mrs. M. Fearing for their help and cooperation.

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The townspeople of Holstein, Iowa, gave Dr. James W. Martin a plaque as a memento of the gathering, at the high school auditorium there, May 5, where more than 1,000 of them said "thank you" for his 30 years of service to them, and wished him health and happiness during his retirement.

The Social Security Disability Program

HOMER E. WICHERN, M.D.
Des Moines

If your patient pays—or if he has ever paid—social security contributions on his earnings, he and his family may be covered by the Social Security Disability Program.

In the Disability Program, a person may be eligible for monthly payments if he is disabled because of a severe physical or mental impairment which has lasted (or is expected to last) a year or longer.

The disability program was improved by legislation that became law early this year. As a result of an increase in benefits under the new Social Security Amendments, monthly payments can amount to $189.90 for a disabled worker and $395.60 for a family. In forthcoming years, maximum monthly benefits will be as much as $218 for an individual and $434.40 for a family.

To be insured for disability purposes, a person disabled when he is 31 or older needs to have worked under Social Security for at least five of the 10 years preceding the onset of disability. For younger workers, who may not have had the chance to work that long, the work requirement ranges down with age to as little as 1½ years of work credits.

Under the new Amendments, an additional group of people—disabled widows (including certain surviving divorced wives) and disabled dependent widowers of insured workers—can become eligible for reduced benefits at 50 years of age or older, even though they themselves have never worked. The disability must occur before or within seven years after the spouse's death—or, in the case of a widow caring for a child entitled to benefits, within seven years after the termination of her benefits as a mother.

Benefits begin with the seventh full month of disability. (A 6-month waiting period is required by law.) Payments can last as long as the disability continues. At 65, payments to disabled workers are converted into retirement benefits without any change in amount.

HELPING YOUR PATIENTS

Many physicians routinely advise any patient who they think might qualify for disability benefits to consult his Social Security office. Such advice can be a great service to the patient. Since disabled patients are often having financial difficulties, your suggestion that they file may result in their getting urgently needed funds.

The people in any Social Security office can tell a claimant what the eligibility requirements are, and can help him apply for benefits. If a person is unable to come to the office because he is homebound or hospitalized, a Social Security representative can arrange to visit him.

Up to the present, the most frequent causes of disability have been arteriosclerotic and hypertensive heart disease, emphysema, schizophrenic disorders, pulmonary tuberculosis, rheumatoid arthritis and osteoarthritis.

REPORTING DATA

When a patient applies for disability benefits, he is asked where he has received treatment. He also signs a consent form that authorizes any physician having medical records pertaining to him to furnish reports for official use in an evaluation of his disability.

Disability decisions are made by an evaluation team consisting of a physician and a lay disability-evaluation specialist. The team works in an agency of the state where the applicant lives.

Typically, the evaluating physician is a

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private practitioner serving the agency on a part-time basis. He reviews the reports from physicians and hospitals, and in conjunction with the non-medical member of the team, decides whether the applicant's impairment is disabling under the law. The evaluating physician neither sees nor examines the patient. He depends entirely on the evidence reported by you and others who have examined or treated the applicant.

Experience has shown that the extent of a patient's disability can be determined largely on evidence from his own physician's records. By giving a detailed report of objective data in your files, you can help speed the decision on your patient's claim. On the other hand, long delays can result if the physician responsible for evaluating the evidence must write back to you or go to other sources for medical information about symptoms, signs and laboratory findings that you may already have in your files.

For best results, report the same information that you would send any colleague in an attempt to give him a complete medical picture of the patient. The report should contain not only a diagnosis, but also a complete history, and results of a physical examination and of relevant diagnostic tests.

You may wish to save time in preparing the report by enclosing photocopies of pertinent portions of the patient's chart, including laboratory reports, electrocardiograms, X-rays and the like. Originals are welcome, and will be promptly returned if requested.

Under the law, your patient—not the government—is responsible for providing the initial medical evidence in support of his claim. This is true even though you may receive a request for a report directly from a Social Security office. That is done as a courtesy to the patient and at his request, to help expedite his claim. Thus, the government cannot assume responsibility for any charge you may wish to make for furnishing medical information from your records.

Sometimes an evaluation requires more medical evidence than is available in the patient's chart. In that situation, the physician evaluating the claim may ask you to perform the needed tests and examinations, at government expense, or he may find it necessary to refer the patient for an independent consultative examination, also at government expense. When the latter is done, the consultant's report can be sent to you if you request it.

"CHILDHOOD DISABILITY"

Besides covering disabled workers and disabled widows, the Social Security program has a provision for "childhood disability benefits"—a somewhat anomalous title since these benefits are paid after the person reaches 18. Ordinarily, children cannot get Social Sesurity benefits as dependents after reaching 18 unless they are full-time students, and then only until they reach 22 years of age. But under the "childhood disability" provisions, a person continuously disabled since before reaching 18 can be eligible for benefits after he reaches 18.

"Childhood disability" payments begin when the beneficiary's parent covered under Social Security dies or becomes entitled to retirement or disability benefits. If he remains disabled, benefits can continue as long as the "child" lives. He need not himself have worked under Social Security.

MOTIVATING REHABILITATION

Besides providing cash benefits, one of the main goals of the Disability Program is to help restore as many applicants as possible to gainful work. At the time your patient's claim is being evaluated, he is also being considered for possible services by the Iowa Division of Vocational Rehabilitation Education and Services. Such services—which include medical rehabilitation, counseling, teaching of new employment skills, training in the use of prostheses, and job placement—are usually financed from state-federal appropriations.

Additional resources are also provided through Social Security trust funds to pay the costs of rehabilitating certain disability beneficiaries. This should save Social Security money, for in the long run the cost of rehabilitating beneficiaries is less than the expense of paying them benefits.

As the patient's physician, you are in a good position to reinforce his interest in returning to productive work, if that is feasible. Incorporated in the Social Security Disability Program are several incentives for rehabilitation that doctors often cite to help motivate patients.

For instance, a worker on the disability rolls who returns to work despite a severe impair-

ment may continue to get monthly benefits for as long as a year while he tries to reestablish himself as self-supporting. If at the end of that period he shows himself able to work, benefits stop. Benefits continue, however, if his attempt is unsuccessful. This arrangement helps overcome the anxiety of a beneficiary who fears all income will be cut off if he fails in his attempt to work.

As a further incentive, former beneficiaries who have recovered or returned to work get special consideration if they again become disabled. If disability recurs within five years (seven years for widows), they need not go through the normal six-month waiting period before benefits resume.

SOCIAL SECURITY DISABILITY PROVISIONS AT A GLANCE

- Benefits go to disabled workers under 65 and their dependents.
- A disabled worker needs credit for having done a certain amount of work under Social Security. If he is disabled before age 31, he can now be eligible for benefits with credit for fewer years of work than were formerly required.
- If the spouse was covered under Social Security, a widow or a dependent widower who is 50 or older can receive reduced benefits based on disability.
- Persons handicapped continuously since before 18 years of age may get benefits under the "childhood disability" provisions when a parent covered under Social Security dies or becomes entitled to retirement or disability benefits.
- Benefits are payable if the disability has lasted, or is expected to last, 12 months or longer, or to result in death.
- Benefits generally begin with the seventh full month of disability.
- Benefits for a worker are the same amount that his retirement benefits would be if he were 65.
- All applicants are considered for Vocational Rehabilitation services.

New Residency Programs in Omaha

A residency program for the training of physicians in neurology as a specialty will be started at the University of Nebraska Medical Center in July. This will be the first time that training for that specialty has been available in Nebraska. Dr. Walter J. Friedlander, professor and chairman of the Department of Neurology, said the length of the residency will be three years. Three new physicians will be admitted each year, and when the program is in its third year, there will be a total of nine residents. The program has received approval from the American Board of Psychiatry and Neurology and the Council on Medical Education of the American Medical Association. The residents will be at the University of Nebraska Hospital as well as the Veterans Administration and Douglas County Hospitals in Omaha.

This will be the second new residency program starting this summer at the University of Nebraska Medical Center. The Medical Center earlier announced the start of a four-year program in orthopedic surgery.

Rehabilitation Center for Emphysema Patients

The University of Nebraska Medical Center in Omaha has activated its Regional Center for the Rehabilitation of the Emphysematous Patient. The Center was established with a Rehabilitation Services Administration grant to serve patients on a referral basis in the states of Nebraska, Kansas, Missouri, Iowa, North and South Dakota and Minnesota.

Referrals are accepted from state vocational rehabilitation officers and from private physicians.

Each referred patient is hospitalized for 24 days, during which time the Center determines the extent of rehabilitation possible for him, and the management and equipment required. The goal is to return the patient to self-supporting activity.

Each patient will receive a comprehensive radiologic investigation, hematologic studies, pulmonary physiology testing, programmed physical conditioning, social and psychological evaluation, group and individual psychotherapy and vocational rehabilitation.

Any patient with chronic obstructive airway disease is eligible for referral if he has exertional dyspnea, easy fatigability and/or decreasing capacity for all activities.

The patient must be under 65 years of age, unless he is gainfully employed; then he must be under 70 years of age. He must also be over the age of 21.

There must be objective evidence of obstructive airway disease, and the first-second forced-expiratory volume must be less than 70 per cent of the total forced-expiratory volume.

Dr. Irving Kass is director of the regional center.

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 492

Chest Pain, Cholecystectomy, Shock, Hepatomegaly

RAYMOND F. SHEETS, M.D., Chairman
CPC Committee
MRS. REBECCA FRIEDMAN, Secretary

SUMMARY OF CLINICAL FINDINGS

The patient, a 29-year-old white woman, was first seen at University Hospitals because of vaginal bleeding. The diagnosis was incomplete abortion, and the treatment was dilatation and curettage. On the same admission she was seen in neurology with left-leg and low-back pain, and the diagnosis was lumbosacral instability and left lateral femorocutaneous hypesthesia. She was next seen one year later with lumbosacral instability, and the diagnosis was a second-month intrauterine pregnancy. She was not seen again until her final admission five years later.

At the time of her final admission she gave a three-month history of intermittent, sharp, bilateral, subcostal pain unrelated to meals, and she said that recently her attacks had occurred at the rate of two times per week. There was no nausea, vomiting, jaundice or fever associated with the attacks. A review of systems was unremarkable. The patient was gravida IV, para III, abortus I, and was taking birth-control pills. Physical examination revealed an obese white female with a pulse rate of 74/min., a blood pressure of 156/96 mm. Hg, and a body weight of 220 lbs. Her lungs were clear to percussion and auscultation. Examination of the heart revealed no murmur or arrhythmia. The abdomen was markedly obese, and there was mild epigastric tenderness. No masses were palpable. There was no peripheral edema. Laboratory examinations revealed a hemoglobin of 13.4 Gm. per cent, a white blood cell count of 8,900/cu. mm., a normal urinalysis, a blood urea nitrogen of 12 mg. per cent, creatinine 1 mg. per cent, alkaline phosphatase 7.8 units, and bilirubin 0.1 mg. per cent at one minute and 0.3 mg. per cent at 30 minutes. A chest x-ray was within normal limits. An oral cholecystogram showed gallstones in a functioning gallbladder. An upper gastrointestinal series was normal.

The patient was admitted to the hospital for a cholecystectomy, and while awaiting her operation she developed chest pain along the left edge of the sternum, and pain with respiration. No further note was made of difficulty during the preoperative period. Several days following her admission, she was taken to the operating room, and the abdomen was explored through a right subcostal incision. The gallbladder was found to be distended, but uninflamed, and it contained multiple small stones. The gallbladder was removed, and the operative cholangiograms that were obtained were normal. The remainder of the intraabdominal examination was negative. The operating time was two hours. The patient's blood pressure remained stable throughout the operation at 115/80 mm. Hg.

On the first postoperative day the patient's temperature was 99°F. There were decreased breath sounds at the right base, but no other abnormalities were noted. On the second postoperative day the patient's bowel sounds had returned, but she was coughing poorly. Her vital signs were stable, but she fainted while attempting to walk. Again on the third postoperative day she fainted while walking. The blood pressure was 90/60 mm. Hg, the pulse

was 112/min., and the respirations were 48/min. and shallow. At that time her hemoglobin was 12.2 Gm. per cent, and her white blood cell count was 12,950/cu. mm. Later on the third postoperative day she became shocky, and her blood pressure was unobtainable. Three units of blood were given her rapidly. Her blood pressure returned to 110/90 mm. Hg, and her pulse rate was 110/min. She developed a palpable right-upper-quadrant mass, and she consequently was reexplored and hepatic congestion was found. During the 24 hours following the second operative procedure she had five cardiac arrests and was resuscitated four times by means of closed cardiac massage.

During the entire postoperative period her pulse remained rapid, and her blood pressure remained in the range of 100/50 mm. Hg. At one point the venous pressure was found equivalent to 27 cm. H_2O, and for that reason she was subjected to phlebotomy and was treated with digitalis. An EKG obtained during her last 24 hours of life revealed right bundle branch block. Her hemoglobin was 14.8 Gm. per cent, and her white blood cell count was 21,600/cu. mm. Serum electrolytes obtained revealed a sodium of 144, a chloride of 112, a potassium of 3.7 and a CO_2 of 22 mEq./L. The serum glutamic oxaloacetic transaminase was 1220 units. From the time of her first cardiac arrest until her final arrest, the patient was maintained on a Byrd respirator.

CLINICAL DISCUSSION

Dr. Edward W. Green, Surgery: Today's CPC, No. 492, the case of a 29-year-old woman who died following a cholecystectomy, will be discussed for the students by Mr. Struyk.

Mr. C. D. Struyk, junior ward clerk: The patient's history included lumbosacral instability, noted five or six years prior to her final admission. "Lumbosacral instability" tends to be a wastebasket category for all vague, undiagnosed cases of low-back pain. That difficulty occurred five years prior to the patient's last admission, and a lack of subsequent complaints or x-ray abnormalities observed in the interim tends to rule out any relationship between it and her fatal illness.

As the protocol says, the presenting complaint on her last admission to University Hospitals was intermittent, sharp, bilateral, subcostal pain. Although the students considered other causes of subcostal pain such as chronic relapsing pancreatitis, coronary occlusion disease, acute lobar pneumonia and cardiospasm, it was their feeling, based on the physical, laboratory and x-ray findings in the protocol, that the cause of the patient's chief complaint was gallbladder disease.

The cause of this woman's death remains unexplained, however. The students think that because of the acute and rapid course of her illness, a neoplastic process could not have been involved. They also think, because of the final sequence of events, that postoperative complications are most likely to have been the cause of her death. Several such complications were considered, the first of which was postoperative hemorrhage.

Postoperative hemorrhage was suspected on the basis of the developing shock, and the palpation of a right upper-quadrant mass. The second operative procedure, performed because of this development, revealed only a congested liver, and no hemorrhage.

Pericarditis with cardiac tamponade was also considered as an explanation for her symptoms. Those of her signs and symptoms that are characteristic of pericarditis were the sudden fall in cardiac output, the systemic congestive failure, the declining blood pressure and pulse pressure, and the rapid enlargement of the liver. In contrast to other forms of shock, the shock associated with pericardial tamponade is accompanied by increased venous pressure, such as was seen in this case. The only factors inconsistent with this diagnosis were that no friction rub was heard and no paradoxic pulse palpated. Pericarditis in this patient might have been a consequence of infection, or it might possibly have been secondary to myocardial infarction.

Myocardial infarction itself was thought of as a means of explaining the woman's death. Myocardial infarction manifests itself in many ways other than the classical constrictive, steady, substernal pain that is unaffected by body movements. Painless infarction, especially during anesthesia or during postoperative narcosis, is not uncommon and will cause the clinical picture of shock, failure and arrest that were seen in this instance. But neither her preoperative episode of pleuritic pain lateral to

the sternal border, nor her history of intermittent, bilateral, subcostal pain is suggestive of the angina of myocardial ischemia. The EKG picture of right bundle branch block makes one hesitant about diagnosing a myocardial infarction. If this patient had been 55 years of age and male, it would be hard to rule out the possibility of a postoperative myocardial infarction as the terminal cause of death, but myocardial infarction in a premenopausal woman only 29 years of age is such a rare occurrence that some more likely cause must be sought.

Bacteremia with septic shock must be considered as a complication in this patient. In addition to a lowered blood pressure, she demonstrated hyperpnea, initially without signs of pulmonary congestion, and leukocytosis—both standard signs of septic shock. In a study of 169 cases of septic shock at Los Angeles County Hospital, a manipulative or traumatic event had occurred in 50 per cent of the cases. A negative finding that points to a diagnosis of septic shock in the patient under discussion is the absence of localized signs of hemorrhage or infarction. However certain signs characteristic of septic shock were not present. She never became febrile, and in the Los Angeles study that I just cited a fever of at least 101°F., often preceded by chills, was found in 80 per cent of the cases. Septic shock usually occurs within 16 hours after a precipitating event, but this patient did not develop shock until the third postoperative day. Also there was no evidence of infection before or during her two operations. Because of those findings, we tend to discount septic shock as a factor in this woman's death.

In reviewing her history and hospital course, we had to consider pulmonary embolism as a possible cause of death. She was an obese woman, and was taking oral contraceptives at the time of her admission. Although the relationship between oral contraceptives and thrombophlebitis is still controversial, a recent article in the BRITISH MEDICAL JOURNAL concerning a report of the Medical Research Council says, "There can be no reasonable doubt that some types of thromboembolic disorders are associated with the use of oral contraceptives." The patient's entire hospital course was compatible with pulmonary embolism. While awaiting surgery she developed chest and pleuritic pains that may have been the result of an embolus. No further problems were encountered until after surgery, when she developed decreased breath sounds at the right base, syncopal episodes on two separate occasions while she was attempting to walk, tachycardia, rapid and shallow respirations, moderate leukocytosis, cardiovascular collapse, hepatic congestion with an elevated central venous pressure, right bundle branch block and an elevated SGOT. The patient's comparative youth and lack of cardiovascular disease, except for a possible hypertension, are the only factors in the history and physical findings that one might not expect to find in pulmonary embolism.

The students on Third West would be extremely disappointed if the final diagnosis were not pulmonary embolism. They believe that this woman's physical condition, her taking oral contraceptives, her postoperative status and bedrest, plus the findings mentioned previously indicate that as the most likely cause of her death. We can only theorize as to the site of the original thrombus, but most probably it was located in the veins of her lower extremities or pelvis.

Dr. Green: I'm sure a nice fellow like Dr. Givler will not seriously disappoint you. The case will be discussed for the faculty by Dr. Tidrick.

Dr. Robert T. Tidrick, Surgery: The student's job was a very polished one. I guess that is one of the fruits of teamwork, though I don't want to take anything away from his individual effort. He certainly covered the possibilities.

It would be nice if we could put all the things under one hat and favor everyone—the myocardial infarct advocates, the pulmonary embolism advocates and the others. It would be nice if we could build a case for putting them all into one sequence of events and concluding that all of them could be tied together.

I have been trying to recall some instances similar to this, in which there have been such unfortunate changes in events. Mr. Struyk has recapitulated the patient's course very well—that of an obese, multiparous, young Caucasian with a borderline elevation of blood pressure and an ill-defined history of probable musculo-

skeletal pain conceivably related to her long history of obesity. These background elements probably don't contribute significantly to our understanding of the immediate change that took place. Rather, I think we should direct our attention to whether or not there was confusion about the cause of her upper-abdominal pain. The protocol says that she had been having bilateral subcostal, epigastric or upper-abdominal pains for about three months, and that they occurred only twice a week or so. That description is not highly compatible with angina, but we know that some patients have angina that is atypical in location.

A long time ago, when Dr. William Bean and I were medical students, McKinsey's localization theory, or some such thing, was taught to us. We were told to believe—and we possibly should—that in the presence of certain upper-abdominal lesions such as peptic ulcer or cholelithiasis, there is a tendency for a localization of anginal pain in reference to the upper-abdominal lesion. In other words, it was theorized that angina, under those conditions, did not assume its usual pectoral form and did not radiate classically into the left arm and down the ulnar side to the hand. Now I am not much of a cardiologist; in fact I am none at all, and from personal experience I can't give you the percentage of patients who can be expected to have atypical versus typical angina, but I know from personal experience—having been badly confused by two or three individual instances of such atypical pain—that there indeed are some patients who do, and that the confusion is most likely to occur when there is demonstrable disease in duodenal area, when there are hiatal hernia and esophageal reflux, and in rare instances of pancreatitis or in cholelithiasis with repeated attacks of biliary colic.

Let's say that this lady, in spite of her relatively young years, may indeed have been experiencing atypical angina, and that she fell into the 10 or 20 or whatever per cent of patients who do exhibit an atypical picture. Second, let's theorize that the attack of left parasternal pain which is described in your protocol and which occurred during the preoperative period while she was on the ward was, indeed, a myocardial infarct—that at the very time when she was on her way to the operating room she was having an infarction, and that the series of events which started shortly after the operation produced her attacks of syncope because she was suffering from acute left-ventricular failure. When, in preparing to walk, she assumed the upright position, demands were placed on her circulatory output with which it was unable to comply. Syncope followed, and when her condition became very grave, she developed signs of a mass in the right upper-abdominal quadrant, she became shocky, and acute liver congestion occurred.

Now let's put all of these together. In view of the story that the patient had right bundle branch block, we should have to assume that she had somewhat less than the commonest type of myocardial infarct. It would have had to have been one which involved the interventricular septum and which left a raw spot in the right ventricular chamber. Then she must have had a pulmonary embolism, and developed acute cor pulmonale with liver congestion. Next the acute congestion must have been misinterpreted as a hematoma, and exploration was done, further complicating the course, and finally she met with increasing embarrassment, obliteration of the pulmonary circuit, and increase in pulmonary hypertension, failure and death.

This is the only way I can put all of this together, and there are a lot of frail points in the structure. As Mr. Struyk pointed out, we unfortunately do not have a baseline electrocardiographic tracing. All we know is that the patient had right bundle branch block, and that may not have had any significance. It may have been congenital. It is conceivable that it could have occurred from any of several causes other than myocardial infarction. It is too bad that we do not have baseline preoperative tracings more commonly, and maybe the subsequent discussants here will bring out whether or not a baseline EKG should be essentially routine for patients who face operations of any magnitude.

There are a number of other causes that could have been associated. They do not, however, fit into the sequence of things here. If the events had been due to some transient derangement in the patient's electrolyte balance, with significantly low serum potassiums, it could be explained, but that clue has not been given us. There is no reason to believe, from

the protocol, that she was uremic. Uremia certainly is said to be a part of some types of peculiar and bizarre myocarditis such as those of viral origin. It can be seen in patients with septicemia, but that might be stretching a point here.

Now in relation to the other manifestations, I should concur with the previous discussant that pulmonary embolism indeed could explain a good many of them. We have performed abdominal operations following palpation of an acute mass in the right upper quadrant, and have found that it was due to acute congestion of the liver. I did so, one Sunday afternoon, in company with one of our senior internists here, when we both felt that the patient had an acute and maybe even a gangrenous gallbladder. In that case the patient had chronic cor pulmonale, had had a shower of successive pulmonary emboli, and on that day simply had had one more increment. I have operated upon another patient in whom there was acute cor pulmonale and an unrecognized, quiet, painless pulmonary embolus. Mr. Struyk already has very clearly pointed out the relationship between pericarditis and the pericardial constriction that can occur with a bloody effusion. That, indeed, was good reasoning. Under certain conditions, of course, it can occur in left-sided failure. The liver may become quite tender and the enlargement may be less dramatic. We may admit the confusion there. I think we can conceivably put this together in a patient who has had a myocardial infarct and an embolism arising from the right-sided chambers of the heart.

I think there are some other things we should consider, but they are bizarre or farfetched. One of those you perhaps hinted at but did not discuss would be the possibility of sudden hemorrhage into an intrahepatic lesion. I once saw a patient who had a solitary neoplasm deep in the liver and had had a tremendous hemorrhage into it. There had then been a sudden enlargement of the liver, and an immediate, almost lethal shock, but there should be additional clues in the protocol to suggest that. In any patient who has this kind of catastrophe after a biliary-tract operation, we always have to consider whether pancreatitis may be lurking in the background, but since the other clues are lacking, I feel that pulmonary embolism was present and that there was a significant factor of heart disease. Then, for convenience in trying to put these together, I postulate that the patient had a myocardial infarction and a pulmonary embolism as a terminal event.

Dr. Robert L. Givler, Pathology: The major autopsy finding was pulmonary embolism. Both of the major pulmonary artery branches were occluded by thrombi that extended peripherally into the smaller branches. Microscopically, all those thrombi in the lung were of short duration. None of the emboli showed organization. The lungs themselves were edematous and had some dependent congestion. Microscopically, infarction was limited to a small area in the lungs.

The probable sources for the emboli were the pelvic veins. The internal iliac veins and the pelvic veins were grossly distended by thrombi at the time of autopsy. More proximally, the iliac veins were patent. The leg veins were not specifically mentioned in the autopsy protocol. In addition there was a small recent thrombus in the left atrial appendage. The heart showed gross changes consistent with acute pulmonary hypertension, in that the right atrium and the right ventricle were dilated. The prosector said that when the atrium was incised for a blood culture, blood continued to spurt from the atrium for three or four minutes. There was no evidence of chronic disease in the heart, or of frank myocardial infarction. There were foci of hemorrhage in the myocardium, and some small isolated foci of necrosis in the myocardial fibers. The conduction system of the heart was not examined.

The additional findings at autopsy probably related to the pulmonary embolism and the secondary shock. First, there was no evidence of excessive pulmonary atherosclerosis. The literature contains careful autopsy studies which indicate that pulmonary emboli are usually multiple, and often occur at different times during a patient's life. These phenomena have been reported to result in chronic pulmonary hypertension, but this patient had no evidence of old emboli in the lungs.

The liver was slightly enlarged at the time of autopsy. Yellowish, mottled areas represented extensive necrosis alternating with darker, normal-looking parenchyma. One of the problems in this case was that of sorting out the sequence and the cause of the hepatic necrosis.

We have two plausible reasons here. Central lobular hepatic necrosis can occur from shock alone. In fact, shock is the common cause. Some investigators feel that pure congestion of the liver, no matter how acute, does not produce central lobular necrosis of the liver, but rather leads to hemorrhage and atrophy of the liver cords. On the basis of experiments, a patient such as this must have had a very acute onset of the passive congestion, and some writers feel that this can result in actual necrosis. Next, there was considerable congestion and a great deal of hemorrhage.

The kidneys in this patient were both grossly swollen, with a pale cortex showing yellowish mottling. The pyramids were darker and red. The microscopic features of the kidneys might be labelled as diffuse cortical necrosis of the tubule. Dr. Tidrick mentioned that there was no indication of uremia in the protocol. A blood urea nitrogen determination was not done at autopsy. There was no uremic pericarditis or any of the other features to go with uremia. The kidneys resembled those found in patients who have received vasopressors for one or two days before death. There was no cellular reaction, and the changes were difficult to distinguish from autolysis.

The cytoplasmic changes in this case did not indicate that it was real necrosis. As a thrombus forms, platelets adhere to the intima, they are in turn layered with fibrin, continued blood flow through the vessels adds more platelets and fibrin, and the resulting dense mass is the "white head" of the thrombus. We depend upon finding these platelet bars and fibrin masses to establish that the structure is, in fact a thrombus formed during life and under conditions of moving blood. The propagated portion of the thrombus (the red tail) represents clotting in stagnant blood distal to the occlusion of the vessel by the white head of the thrombus. The propagated portion is especially likely to embolize, and after impacting in the pulmonary circulation, it can partially retract. Therefore the amount of fibrin and platelets one sees in sections of an embolus will vary. Because once the thrombus lodges in the pulmonary artery it can continue to grow, one must obtain sections from the right area. All this makes it difficult to evaluate the age of a given thrombus, and anyway, there is no proof that thrombi organize at the same rate. It has been found experimentally that they organize more rapidly in pulmonary arteries than in systemic arteries, and perhaps emboli which have been "aged" at their site of origin may be more resistant to organization. As I have said, the emboli evaded organization in the lung sections. However some of the pelvic veins did show early organization that conceivably could have begun at the time of surgery—three days prior to death, I believe that was.

Dr. Green: I have asked Dr. Kroetz to talk to us on the hemodynamics of cardiac failure, the condition that apparently befell this patient after a pulmonary embolism.

Dr. F. W. Kroetz, Internal Medicine: The hemodynamic problems associated with pulmonary emboli are primarily related to the mechanical blockage of circulation through the pulmonary vascular bed. There are some who feel that in addition to that mechanical blockage there are also some reflex arterial constrictions.

Figure 1 is a pulmonary arteriogram on a 40-year-old woman who had had repeated episodes of pulmonary embolization. This injection was made more or less selectively into the right pulmonary artery, and I think you can see the lack of filling in many secondary and some tertiary branches of the pulmonary artery tree. The whole right pulmonary vascular field was quite hypovascular, and I think you can see big areas where there seems to be no ar-

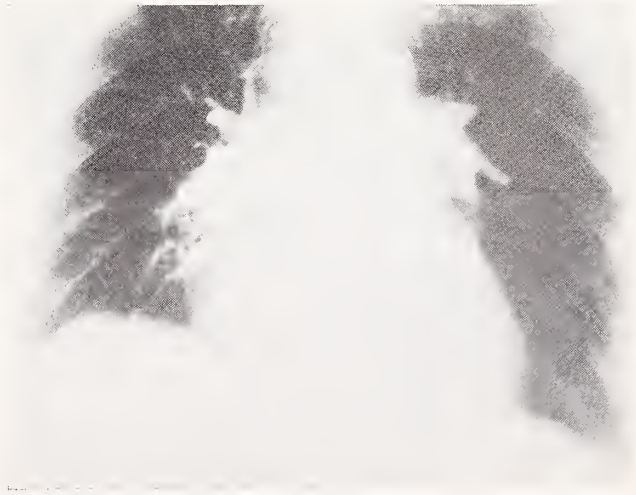


Figure 1. A pulmonary arteriogram on a 40-year-old woman who had had repeated episodes of pulmonary embolization. Note the lack of filling in many secondary and some tertiary branches of the pulmonary artery tree, following injection into right pulmonary artery.

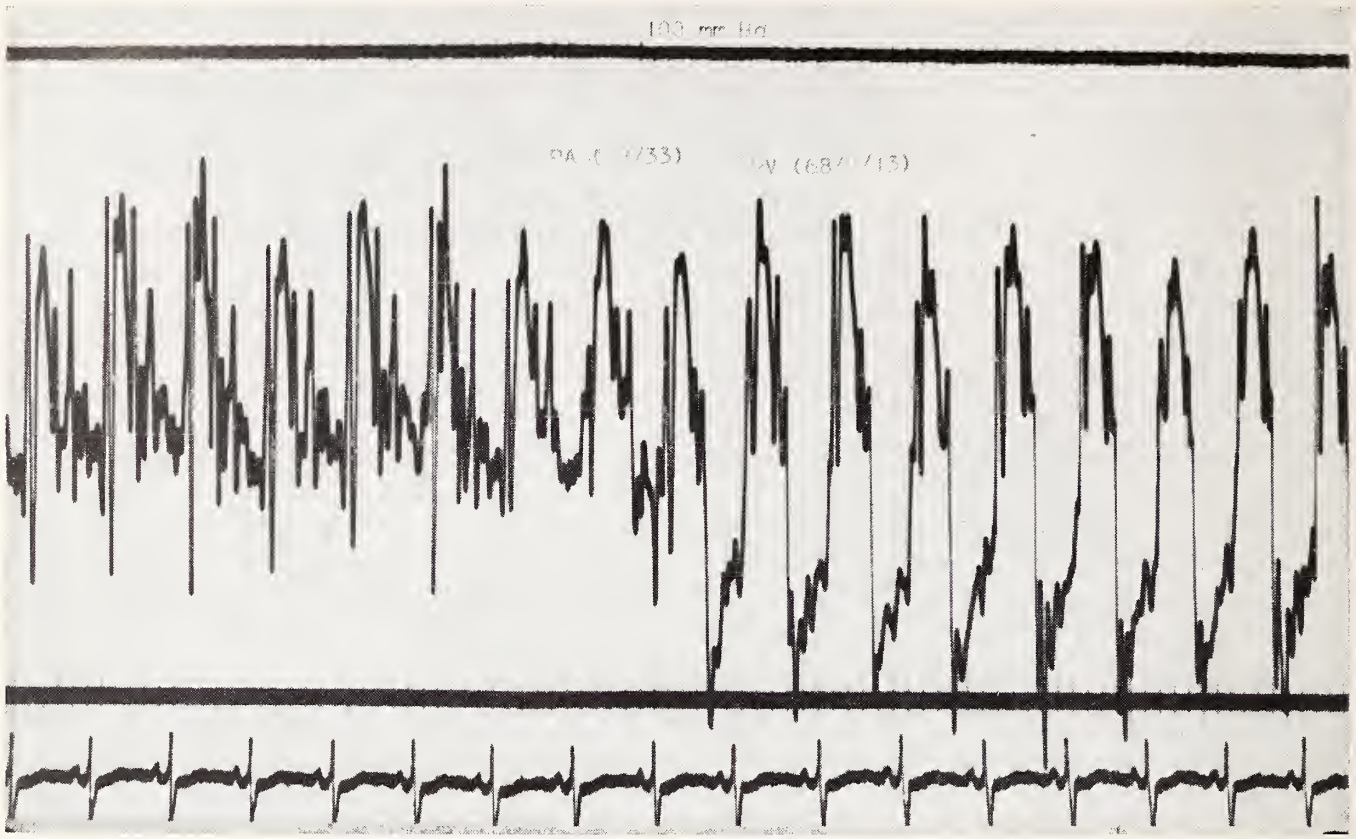


Figure 2. A pressure tracing on the same patient, showing that the right ventricle was developing a systolic pressure of 68 mm. Hg, or about twice normal. The pulmonary artery pressure was 68/33 mm. Hg, or about twice normal.

terial circulation at all. Selective injection into the left pulmonary artery revealed similar changes, with extensive blockage of pulmonary arteries.

This woman had significant hemodynamic alterations. The pulmonary vascular bed contains a rather large built-in reserve. It can handle several times the normal cardiac output without any significant change in the pressure driving this volume of blood through the pulmonary circulation. In experimental preparations, 65 per cent of the pulmonary arterial bed must be lost before significant hemodynamic alterations occur. When that happens, there is a pressure elevation in the right side of the central circulation.

Figure 2 is a pressure tracing of the same patient. It shows that the right ventricle was developing a systolic pressure of 68 mm. Hg. That was about twice the normal systolic pressure. The pulmonary artery pressure was 68/33 mm. Hg, or about twice normal. The right ventricle was trying to compensate for the mechanical blockage by increasing the perfusion pressure through the pulmonary arterial bed. The right ventricle was unable to meet this increased pressure work load by an increase in myocardial contractility alone, and to compensate for the increased work load there was an increase in the end-diastolic volume of the right ventricle and in the end-diastolic pressure. Figure 3 is a tracing of the right ventricular pulse, with the top line representing 40 mm. Hg. The peak of the right ventricular pressure curve went off the edge of the chart. It illustrates that the right ventricular end-diastolic pressure was considerably elevated—almost to 20 mm. Hg, or about twice or 2½ times normal pressure.

Figure 4 is the right atrial pulse tracing. With elevated right ventricular end-diastolic pressures and dilatation of the right ventricle, the filling of the right ventricle becomes increasingly difficult. The right ventricle becomes less compliant—i.e., it offers more resistance to distension, so that the right ventricular filling can be maintained only at the expense of high filling pressures. The right arterial A wave is about 20 mm. Hg, or about twice normal. The normal A wave is 8 mm. Hg or less. Right

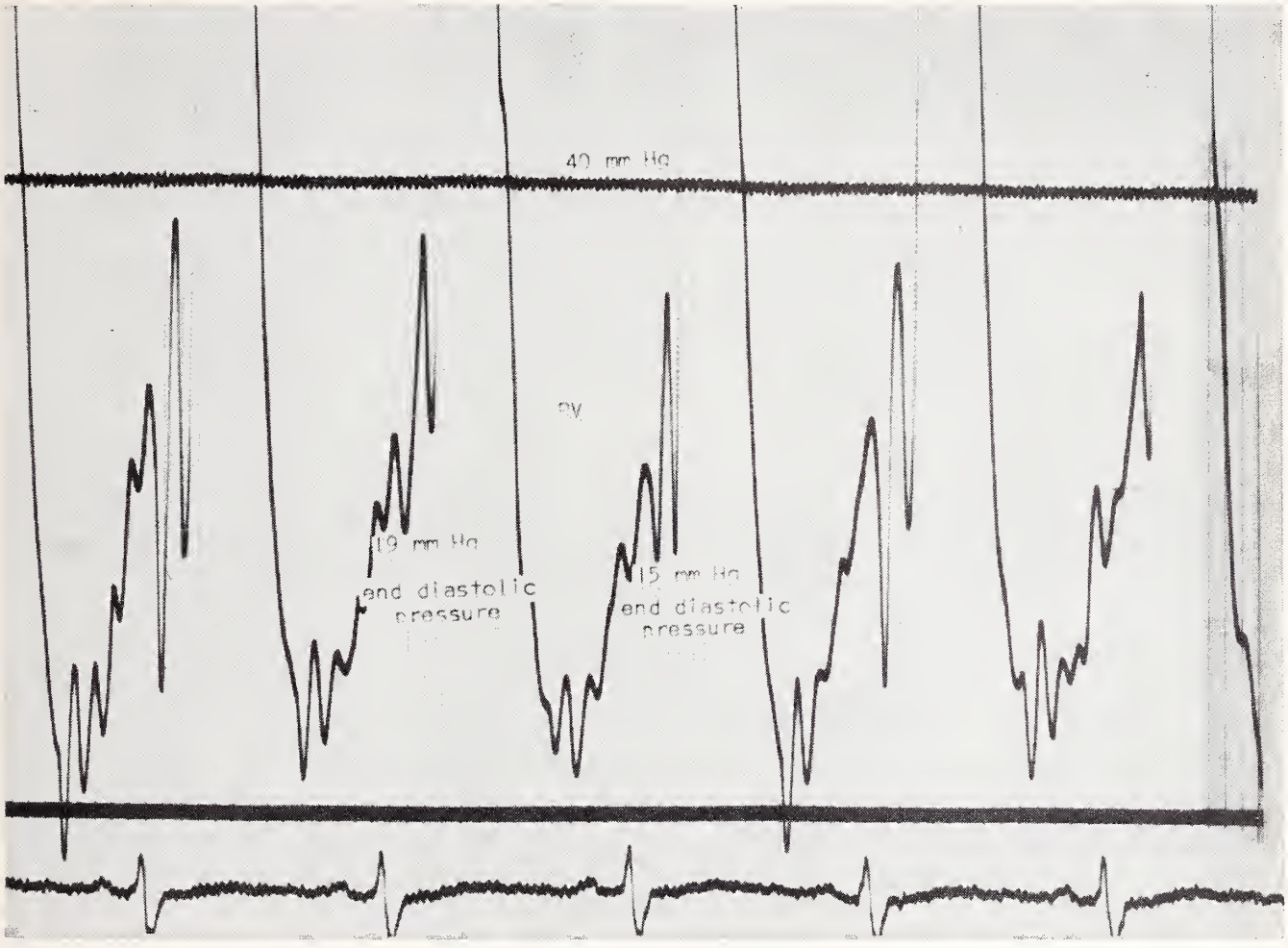


Figure 3. A tracing of the right ventricular pulse, with the top line representing 40 mm. Hg. The right ventricular end diastolic pressure was almost 20 mm. Hg, or twice to 2½ times normal.

ventricular filling was being maintained only by marked elevation of the right atrial pressures and, of course, that resulted in a marked elevation of the venous pressure throughout the venous system. Those high filling pressures and elevated venous pressures result in passive congestion of the liver, a condition that is very common in patients who have enough embarrassment of the pulmonary vascular bed as a result of pulmonary embolization to produce hemodynamic changes.

Other hemodynamic changes are more or less common with pulmonary emboli unrelated to venous congestion. There is a relatively high incidence of myocardial infarction with pulmonary embolization. It may be due to a pulmonocoronary artery reflux mediated through the vagus. Increased pressures in the pulmonary arteries may produce coronary vasoconstriction, and this may lead to the myocardial infarcts. The infarction can also occur secondary to systemic hypotension. The right heart usually cannot maintain normal flow, and hypotension and shock are very common. Also, myocardial infarction can be secondary to the arterial hypoxia that occurs with pulmonary emboli.

Dr. Green: Thank you, Dr. Kroetz.

Dr. Cornell, will you show us some x-rays?

Dr. Steven H. Cornell, Radiology: Now that we know the pathology, it is of interest to go back and look at the patient's chest x-rays. The film taken before surgery was completely normal. Another x-ray taken four days postoperatively was not of very good quality because the patient was supine. A tracheostomy tube could be seen, but there were a great many areas of non-specific haziness.

What would we look for if we suspected pulmonary embolism? One thing would be enlargement of the central pulmonary artery. The other would be an area of avascularity of

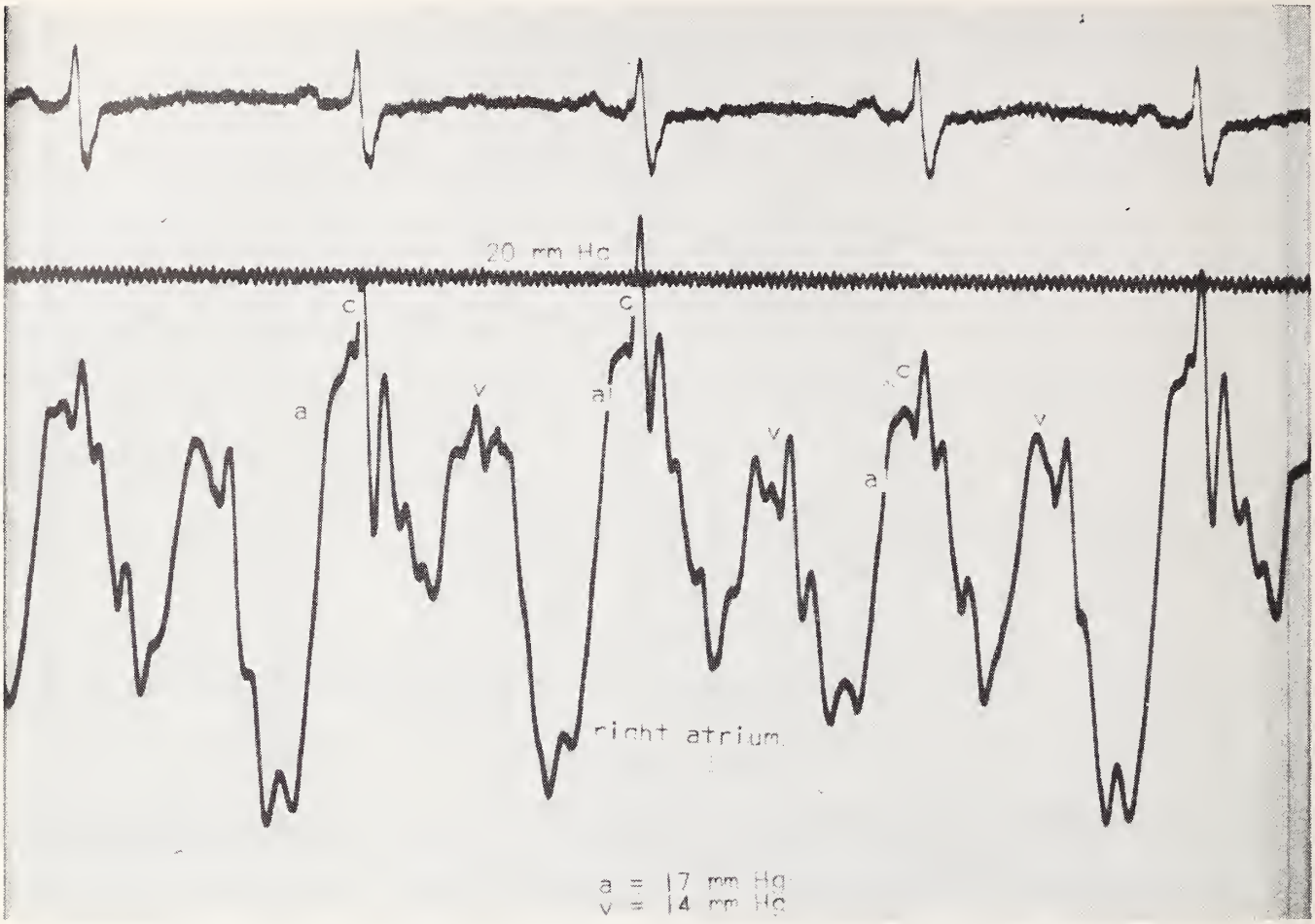


Figure 4 is the right atrial pulse tracing. The right arterial A wave was about 20 mm. Hg, whereas the normal is 8 mm. Hg or less.

the lung. We could not see anything like that in this lady's roentgenograms, and quite frequently the plain films simply are not very helpful.

The next thing to do, if we suspect the diagnosis, is a pulmonary angiogram. Figure 5 is an example of pulmonary embolism, and there is a good demonstration of a filling defect in the right pulmonary artery and of an area which is relatively avascular on the right side. On the left side there is a double-contrast effect in the artery to the lower lobe. One gets the impression that there is a thrombus or embolus in this vessel, and that some of the contrast material is going around it. Figure 6 is a picture of another patient with bilateral, massive pulmonary embolism. Although we see some contrast material in the most proximal part of the right pulmonary artery, there is considerable attenuation peripherally, with very little vascularity in the upper and lower parts of the lung. The left side is worse, with very little if anything in the way of normal vascularity to the lower part of the lung.

Dr. William R. Wilson, Internal Medicine: How can you differentiate between an avascularity caused by a pulmonary embolism and one caused by congenital hypoplasia of one of the pulmonary arteries?

Dr. Cornell: I don't know.

Dr. David Dalrymple, resident, Internal Medicine: Pulmonary physiologists, I think, have described a gradient between the upper and lower portions of the lungs in terms of blood flow and in terms of distribution of inspired air. Since in these studies it is most often true that the lower portions of the lungs are better vascularized, what do you feel accounts for the better visualization of the upper lobes during pulmonary angiography?

Dr. Cornell: I can't reconcile those two, but it is true that many times we see much better

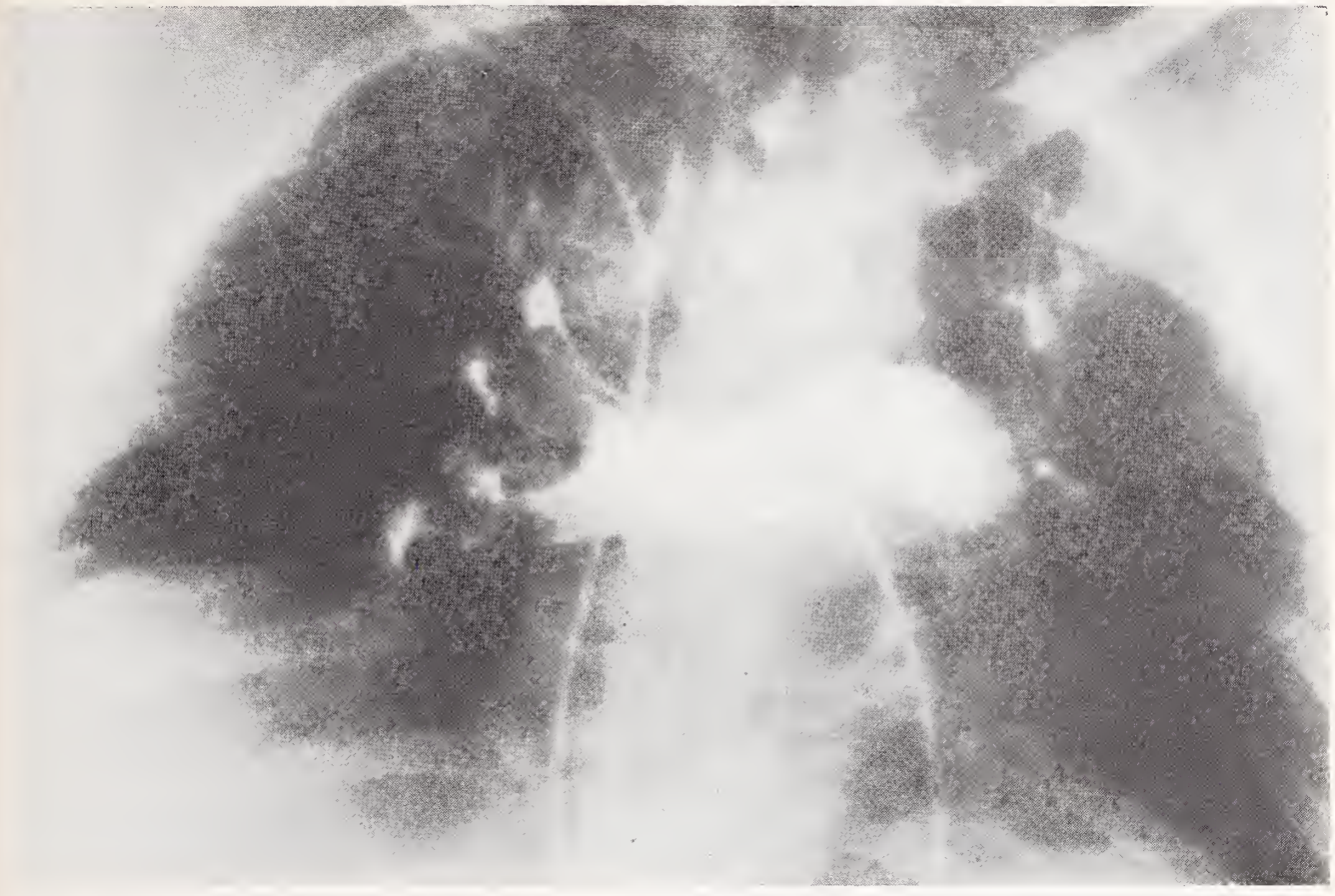


Figure 5. An example of pulmonary embolism. There is a good demonstration of a filling defect in the right pulmonary artery and of an area which is relatively avascular on the right side. On the left side there is a double-contrast effect in the artery to the lower lobe.

vascularity in the upper lobe than in the lower, and that is especially true in people with pulmonary hypertension.

Dr. Edward E. Mason, Surgery: Aren't measurements of pressure a part of the catheterization?

Dr. Cornell: Yes, and I think that when catheterization is done in these patients—if a complete catheterization is done—then pressures are measured. Pressures are usually taken into account before the angiography, but not always.

Dr. Kroetz: Pressures alone give us only an integrated picture of what has happened to the pulmonary circulation. They really are not of much help to us in defining the specific lesion.

Dr. George N. Bedell, Internal Medicine: To answer Dr. Dalrymple's question, I might suggest that two things have to be taken into consideration. First is the position of the patient. I think these studies are done with the patient lying down, rather than sitting up. When the patient is sitting up, the blood flows primarily to the lower lobe. The second thing is that in people with vascular disease involving the lungs, the bases usually are the first areas involved, and there is a consequent switch in the blood flow in vascular disease involving the lungs. The principal flow goes to the upper lobe.

Dr. Frederick L. Benoit, Nuclear Medicine: Radioisotopic lung-scanning procedures have become very prevalent over the past five years and are being used for virtually all lung diseases. However the one disease for which scintiscanning is of greatest diagnostic value is that which we are discussing today, namely pulmonary embolism and particularly pulmonary embolic disease without infarction or roentgen abnormalities. Many of the studies that are requested are in patients who have had x-ray

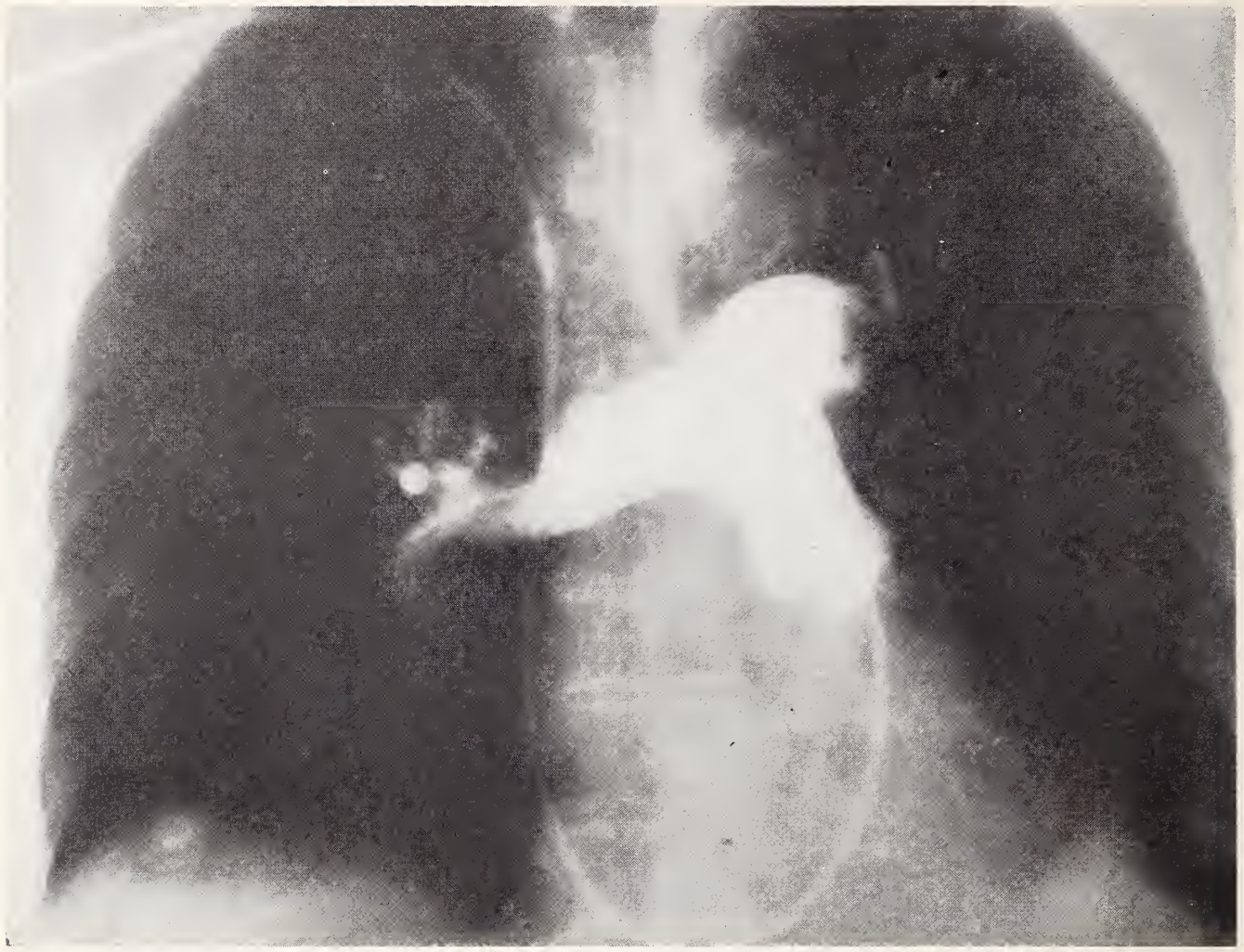


Figure 6. Another patient with bilateral, massive pulmonary embolism. Some contrast material can be seen in the most proximal part of the right pulmonary artery, but there is considerable attenuation peripherally, with very little vascularity in the upper and lower parts of the lung. The left side is worse.

changes, and often the radioisotope scan gives little more information than is already present on the x-ray film.

The basic principle of lung scanning is the radioactively-labelled microemboli are transiently trapped in the pulmonary capillary vascular bed after an intravenous injection, and thus the areas of lung perfusion can be visualized. Actually what we are more interested in demonstrating are the areas of non-perfusion. The radio-pharmaceutical currently used most frequently for this test is macroaggregated human albumin tagged with I^{131}. That albumin is heat-treated so that it forms aggregates ranging from 10 to 15 microns in diameter. If the aggregates are smaller, they localize in the reticuloendothelial system of the liver and spleen, rather than in the lungs. After being deposited in the lungs, the agent is cleared in about six hours, apparently by being reduced to smaller units. Thereafter the isotope is located in the liver and spleen. It has been estimated that the amount of material usually injected is localized embolically in one out of a thousand capillary units.

No lung scan was performed on the patient whom we are discussing today, so I shall show you some representative samples. Figures 7-9 show the results of a normal lung scan. They are the anterior and both laterals, which are the views usually obtained. The uniform distribution of isotope throughout both lungs indicates normal pulmonary perfusion. In the anterior view, the outline of the heart is obvious. Figures 10 and 11 are the lung scan of a 58-year-old woman who had a sudden onset of



Figures 7-9 show the results of a normal lung scan. They are (from left to right) the anterior, the right lateral and the left lateral, and the uniform distribution of isotope throughout both lungs indicates normal pulmonary perfusion.

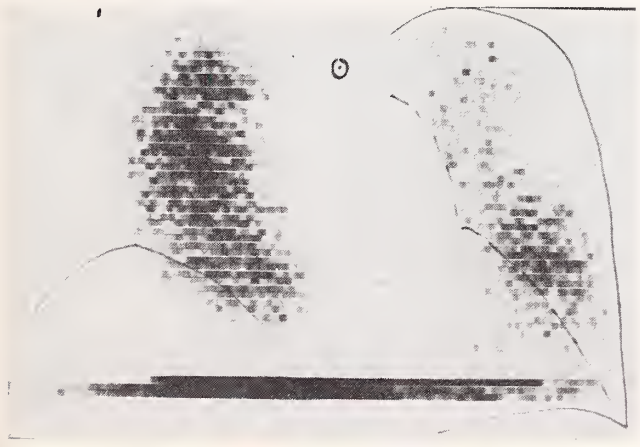
dyspnea and shock on the ninth day after cholecystectomy. Her chest x-ray showed only elevation of the right hemidiaphragm, without other changes. The scan shows an obvious lack of isotopic localization in the left lung, and that is also apparent on the left-lateral view. The patient was treated with anticoagulants, she recovered clinically, and a repeat scan done three weeks later (Figures 12 and 13) showed a return of perfusion in the involved left-upper-lung region.

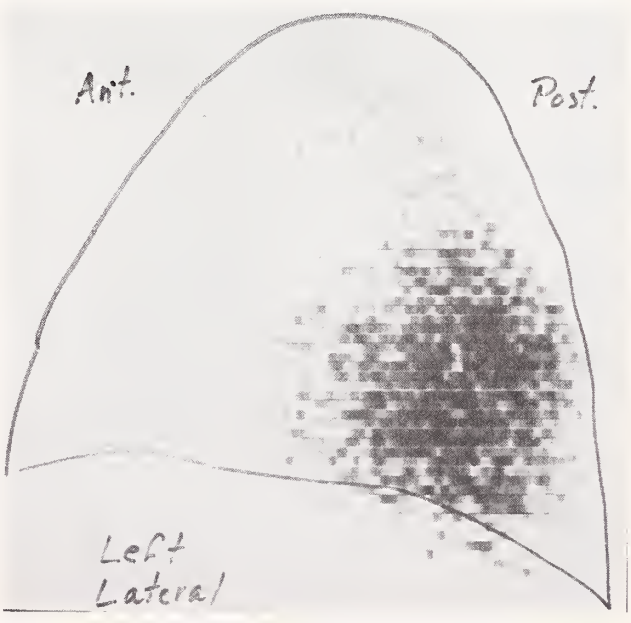
It must be emphasized that the perfused areas of lung are what is visualized by means of pulmonary scintiscanning. Other conditions that interfere with capillary flow, such as emphysema, carcinoma with local compression, etc., may also give abnormal results. Thus the primary usefulness of lung scanning in embolic disease depends on the clinical setting and the absence of x-ray changes.

Dr. Sergio Rabinovich, Internal Medicine: How well can you differentiate pulmonary embolus from pneumonia?

Dr. Benoit: I don't think we can differentiate them at all on the basis of the scan alone. What is visualized is the loss of perfusion, and if there is an infiltrate around a pneumonic site causing local compression and decreased capillary perfusion, it shows up as decreased isotope localization. However one could also get that information from an x-ray, and that is why I emphasize that this test really gives little more information than does an abnormal x-ray. It can be very helpful, however, when the x-ray has been normal.

Dr. Kroetz: These patients are often very sick. I wonder whether you could comment on





Figures 10 and 11 show the lung scan of a 58-year-old woman who had a sudden onset of dyspnea and shock on the ninth day after cholecystectomy. An obvious lack of isotopic localization is evident in the left lung.

the length of time it takes to prepare for one of these studies, how long it takes to do it, and what doing it involves.

Dr. Benoit: The one criterion is that the patient must be able to lie flat. Many of these patients are unable to lie flat comfortably, and we have been unable to get good scans for that reason. The patient must lie flat comfortably for 45 minutes, and the technic consists of injecting material that can be purchased ready for use.

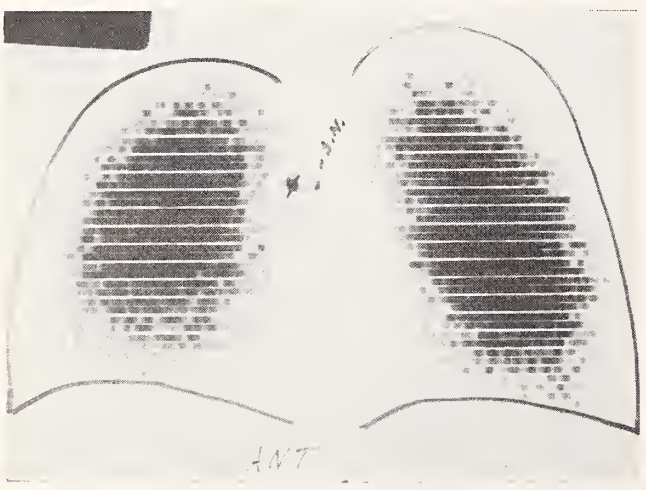
Dr. Green: Dr. Walgren, will you give us a three-minute rundown on urokinase?

Dr. Kenneth L. Walgren, Internal Medicine: The treatment of massive pulmonary embolism can be divided into indirect and direct measures. The indirect treatment consists mainly of general supportive measures and the use of heparin. In recent years more and more attention has been given to the direct parameters of therapy. Thoracotomy with pulmonary embolectomy is the older approach, and it is being performed at several centers. Even with modern pulmonary-bypass equipment a staggering mortality rate continues, however, and increased effort has recently been given to the development of fibrinolytic agents or materials that can dissolve the embolus *in situ*. We have been working with urokinase, one of these fibrinolytic agents, for several months. Urokinase, an extract from human urine, has the ability to convert the inactive enzyme plasminogen to the active enzyme plasmin in the blood stream. Plasmin hydrolyzes the polypeptide bonds of the fibrin clot, thus causing its dissolution. Urokinase is given intravenously in an acute loading dose and then in a continuous infusion so as to maintain an active fibrinolytic state in the patient's blood for about eight hours. During the infusion, several clotting and fibrinolytic tests are carefully monitored.

The effectiveness of urokinase remains to be determined. A definitive controlled study has just now been designed by the National Institutes of Health, but those of us who were involved in the clinical trials of urokinase are quite enthusiastic about it. In the patients whom we selected for urokinase treatment—namely those with angiogram-proved, massive, bilateral pulmonary embolism and clinical shock, one might have expected a mortality rate of about 85 to 90 per cent. Three patients received full treatment, and all survived. A fourth patient was started on urokinase, but the drug had to be discontinued because of a severe coagulation defect that developed secondary to extensive intrapulmonary clotting, and the patient did not survive. In the survivors, the improvement was dramatic. Other centers that have used the material have noted similar results.

I think it is reasonable for us to expect research in this area to continue, and for us to see more and better fibrinolytic agents emerge over the next few years.

Dr. Joseph D. Brown, Internal Medicine: Do you use urokinase with heparin?





Figures 12 and 13 show a return of perfusion in the involved left-upper-lung region of the same patient, following treatment with anticoagulants.

Dr. Walgren: Urokinase is just one of the possibilities for the treatment of pulmonary embolus. One is obliged to use the general supporting measures too. Heparin is unquestionably beneficial, and has been used on all patients. In addition there are two direct attacks on the clot—surgical removal or treatment with a lytic enzyme. They are used in addition to heparin therapy.

Dr. Brown: Your studies have been with heparin and urokinase?

Dr. Walgren: Yes.

Dr. Mason: I had an opportunity to visit with an electronics man from Methodist Hospital, Des Moines, last weekend. He has had some experience with a sonar instrument that uses the Dobler effect. It gives off a hum that is pitched in proportion to the rate of blood flow, and with that instrument one can follow an artery down an extremity and then follow the vein back up the extremity. If there is an interruption in the blood flow, one can find it. Now I have seen people on ocean beaches pursuing the hobby of locating pieces of metal by means of instruments, and I think we ought to encourage hobbyists to start looking for blood clots, by similar means, in the extremities of fat women.

SUMMARY OF NECROPSY FINDINGS

1. Bilateral pulmonary-artery thromboembolism, extensive, originating in pelvic-vein thrombosis
2. Acute dilatation, right atrium and right ventricle, heart
3. Severe pulmonary edema
4. Focal infarction, lung
5. Acute renal tubular necrosis, extensive
6. Acute centrolobular necrosis, liver, extensive
7. Visceral congestion and anasarca
8. Status postoperative cholecystectomy and exploratory celiotomy
9. Thrombosis, recent, left atrial appendage
10. Colloid cyst of thyroid gland
11. Accessory spleen.

DR. TIDRICK'S DIAGNOSIS

Pulmonary embolus.

STUDENTS' DIAGNOSIS

Pulmonary embolus.

Experiments Discredit "Empty Stomach" Eating-Athletic Performance Concept

The traditional concept that athletes perform better "on an empty stomach" had its inception from the physiologic belief that supplying adequate blood to the digestive apparatus and working muscles, at the same time, results in inefficiency in both systems. Unpleasant symptoms experienced by some athletes during strenuous exercise shortly after the ingestion of food, gave credence to this eating-exercise concept.

As a result of a group of experiments performed by Youmans and colleagues,* considerable light has been thrown on meal spacing and meal content relative to athletic performances. The effects of meal spacing (elapsed time between eating and exercise) on athletic performance in track and swimming were studied by the researchers. The track events included the 50-yard and 100-yard dashes; and the 440-yard, the half-mile, and the two-mile. The swimming events were free-style and included the 100-yard, the 200-yard, the 400-yard and the one-mile.

Subject—There were 129 different subjects involved in the experiments. There were 14 high school boys, 24 college women (all in the swimming events) and 91 college men.

Experimental Procedure—Youmans and Ball studied the effect of eating at six different intervals, from 30-minutes to three hours, before the athletic event. Alley and associates employed three time intervals between eating and performance—one-half hour, one hour and two hours.

The Data—The data used for comparisons were a mean of eight trials expressed as elapsed time required to run or swim the prescribed distances for each time interval between eating and the performance of the various events. Therefore, all comparisons are based on a minimum of 64 observations.

The Test Meal—The meal eaten by the subjects consisted of breakfast cereal, milk, toast, butter and sugar. Each meal provided approximately 500 calories, comprised of 70 Gm. carbohydrates, 20 Gm. fat and 16 Gm. protein, providing lasting energy.

Conclusions—The data showed that eating a cereal and milk meal, as prescribed in this experiment, had no demonstrable effect on the time required to perform the running and swimming events studied.

Furthermore, the unpleasant effects following either speed or endurance exercises were not experienced by any of the subjects.

* "A Résumé of the Effects of Meal Spacing on Athletic Performance," published by the Cereal Institute, Inc., Spring, 1968.

President's Page



In October, 1955, a movement began which was destined to have an ever-increasing influence on the quality of service rendered to physicians by their office assistants. On that date, 77 girls working for physicians throughout 15 states met in Kansas City, Kansas, for a discussion of an idea. They were joined by a few physicians as well as representatives of the AMA and a few state medical societies. Those medical assistants were interested in their own need for professional improvement. The sole topic of discussion at this meeting was the question of whether or not a national organization of medical assistants was desired or feasible.

Within the medical profession, this meeting was followed by enthusiastic approval by some, and eyebrow lifting by others. Those who approved were aware of the need for an aide specifically trained to work in a physician's office. Those who were less enthusiastic were somewhat cynical about the motivation for the meeting. Some prophesied immediate demands for wage-and-hour control, and feared that their present assistants who worked satisfactorily with a limited knowledge would not be permitted to continue unless they met certain qualifications.

Fortunately, organized medicine assumed a watch-and-wait attitude, and one year later, in Milwaukee, Wisconsin, another meeting was called to adopt a Constitution and By-Laws and to elect a slate of officers for the American Association of Medical Assistants. Two hundred fifty assistants from 16 states attended that meeting.

Since that time, the AAMA has gradually increased its membership to the present 12,000, and has become accepted by a majority of organized medicine.

The reason for the AAMA's increasing acceptance comes from a perusal of its Constitution and By-Laws, a prominent part of which is the statement: "It is not, nor shall it ever become a trade union or collective bargaining agency." Included in the objectives are, "To inspire its members to render honest, loyal and more efficient service to the profession and the public which they serve."

It has been my privilege, in the past ten years, to have a close relationship to this Association, and I earnestly recommend it to your office help. If there is a chapter in or near your community, I urge that you suggest that your office help at least investigate it, because membership in it can be profitable both to the employee and to her employer.

C. W. Talbot, M.D.

President



Editorials

DESEGREGATION?

"We are in for more regulation, more red tape, more control and, as we warned, of the socialized camel's nose in the tent of medicine. But I am afraid we must make the tent larger, so that we can live comfortably with the camel. Who would have thought that Americans would be compelled to live that way!"

John P. Lynch, M.D.,
Chairman, Medicare Committee,
Richmond Academy of Medicine,
in VIRGINIA MEDICAL MONTHLY,
April, 1968.

HEARING AIDS AND HEARING-AID DEALERS

A recent article on the subject of hearing aids and hearing-aid dealers by Cary N. Moon, Jr., M.D., of the Department of Otolaryngology at the University of Virginia, Charlottesville, is a timely one which appears to be as applicable to the situation in Iowa as it is to the one in Virginia.* Physicians and laymen alike know of friends or mere acquaintances who have purchased one or even several of these devices from enterprising salesmen, at considerable expense, but then have been so disappointed with the results that they have discarded them.

The Virginia physician expressed concern for hard-of-hearing patients who had purchased hearing aids without a previous medical examination. His study of many of those patients revealed that a hearing aid was not really indicated, and in a considerable number, the instrument was improperly fitted. He pointed out that it is the patient with sensorineural hearing loss coming on in later life, with poor discrimination ability, and with an intolerance for noise who seems to be particularly vulnerable to the sales pitch of the overzealous salesman.

According to Dr. Moon, there were instances in which hearing aids had been fitted for people whose hearing loss was due to infectious eczematoid dermatitis of the external auditory canal, or to ear-canal wax, or to fluid in the middle ear, or to other obstructive causes! In fact, according to his experience, such patients represented 10 to 15 per cent of those who had been sold hearing aids. There are another 10 or 15 per cent of patients who are probably borderline cases. They should have been given prolonged trial periods, rather than rushed into immediate and final purchases of hearing aids. It is this group of patients who are very unhappy and disillusioned about their instruments, and according to the author, approximately 80 per cent of them have purchased hearing aids without the benefit of an otologist's evaluation. Many in this group had purchased several successive instruments on the salesman's assurance, in each instance, that a newer or different model would outperform their previous ones.

The Virginia otolaryngologist points out that advertisements of hearing-aid dealers are often misleading, and some of them suggest dramatic relief from any and all kinds of deafness. He

* Moon, C. N., Jr.: Hearing aids and hearing-aid dealers. VIRGINIA MEDICAL MONTHLY, 95:195-200, (Apr.) 1968.

urges strict regulation of hearing-aid advertisements, proposing that their contents be restricted to the name and address of the dealer, and the name of the particular instrument for sale. It should be strictly unethical for him to use terms such as "clinic," "hearing center," or "autologist," and he should be permitted to identify himself only with the words "hearing-aid dealer."

It is emphasized that hearing-aid salesmen can generally be divided into two groups. One group is composed of honest, highly motivated individuals who are dedicated to the rehabilitation of persons with hearing handicaps. The other group consists of supersalesmen whose entire goal is to make a sale.

In an effort to improve service to the hard-of-hearing and to improve the public image of the hearing-aid dealer, ethical dealers have created the Hearing Aid Dealers Association. The organization has an ethics committee which is authorized to reprimand and punish wrongdoers within the membership. The dealer is expected to possess a basic knowledge of hearing-testing methods, he must have modern, well-calibrated equipment for testing, he must know the instrument he sells and the technics for repairing it, and he must carry in stock the necessary replacement parts. Dr. Moon says that the conscientious dealer must insist upon a preliminary otological and audiological examination, prior to the fitting and the sale of an instrument. A basic requirement for everyone engaged in any phase of the healing arts is integrity, and the hearing-aid dealer's primary responsibility is that of a member of the rehabilitation team which undertakes to help people with hearing handicaps. His motivations should consist of service, primarily, and profit only secondarily.

Dr. Moon acknowledges that otolaryngologists in general have been remiss in displaying insufficient interest in the hard-of-hearing patient, and particularly the elderly patient with sensorineural hearing loss. The specialist has been guilty of dismissing such people without proper counseling and without proper attention to follow-up. The doctor has avoided responsibility for hearing-aid selection, and has manifested no interest in the results of sound amplification. One basic difficulty has been that there has been little or no communication between the ear doctor and the hearing-aid salesman.

He emphasizes that it is the duty of the otologist to give all hard-of-hearing patients a serious, thorough ear, nose and throat examination and evaluation. That should include pure-tone audiometry, bone-air thresholds, speech-discrimination testing, and specific diagnostic studies when indicated. Though tuning-fork tests are considered by some to be obsolete, they do help correlate the otological and audiological examinations, and they confirm or deny the accuracy of the pure-tone hearing tests.

A very important responsibiilty of the otologist, according to Dr. Moon, is to discuss with the patient such subjects as the diagnosis, what he can expect in the future, and the possible approaches to the relief of his hearing loss. It is there that the specialist must become the true physician.

The patient should be told what to expect and what not to expect from his hearing aid; the advantages of sound amplification; and the problems of discrimination. The individual who buys a hearing aid somehow expects to enjoy normal hearing again, is quickly disappointed, and discards the instrument. The patient who has been properly counseled, who recognizes the advantages but is prepared to accept and live with the disadvantages will benefit from the device and will use it without complaint. It is the mutual responsibility of the ear doctor and of the hearing-aid salesman to work together in the rehabilitation of the patient requiring a hearing aid. The audiologist, if the community has one, should also be a member of the team. Their cooperative effort should result in a better-treated and a happier hard-of-hearing patient.

Dr. Moon recommends (1) the basic requirement of a complete hearing evaluation consisting of an ear, nose and throat examination and a history-taking by an otolaryngologist, and an audiological evaluation by a qualified audiologist; (2) encouragement of the Hearing Aid Dealers Association, its efforts and its goals; (3) legislation requiring the examining and licensing of hearing-aid salesmen; and (4) creation of a committee to review complaints

by patients, physicians and dealers regarding the sale of hearing aids.

He concludes that amplification by an individually-fitted hearing aid is a part of medical treatment which requires the diagnosis and prescription of a qualified physician. The practice which now obtains, in which the hearing-aid salesman seeks out the hearing-handicapped, diagnoses the type and degree of deafness, prescribes the cure and sells the device, altogether without medical consultation, is indefensible. He urges hearing-aid dealers to join the otolaryngologists in the overall treatment of patients with hearing loss. The refined diagnostic procedures of the otologists and the audiologists are essential in locating and identifying the cause of deafness.

The observations, recommendations and conclusions of the Virginia ear specialist will not meet with the universal approval of otologists or of hearing-aid dealers. The author calls attention to the lack of communication and of rapport between those two groups—a factor which is detrimental to the rehabilitation of the deaf patient. As members of a cooperative and harmonious team, they can alleviate many of the disappointments and frustrations of deaf patients.

HYPOSPADIAS

A recent article entitled "The Hazards of Hypospadias," by Thompson and Baker, of the Section of Urology in the Department of Surgery at the University of Missouri, emphasizes that this common genitourinary anomaly is too often looked upon as nothing more than a cosmetic problem.* But judging from the literature and from their own experience, they declare the cosmetic aspect of hypospadias is relatively insignificant in contrast to the complications of ambiguous sexuality and obstructive uropathy that pose serious and possibly life-threatening hazards to the child with that anomaly.

The authors report having seen 98 children with hypospadias during the past seven years. The condition was present in various forms and degrees of severity, and physicians on the urological service were continually impressed with the wide variety of diagnostic problems and therapeutic difficulties they encountered in that group of patients. The purpose of their paper was to emphasize the complexity of the condition and the concern that should be accorded it. Surprisingly, a considerable share of the therapeutic hazards were iatrogenic—the results of inadequate or inappropriate surgery. However diagnostic errors were often more serious and troublesome.

They point out that any degree of hypospadias may represent the only immediate evidence of some disorder of sexual development. In fact almost any infant with that defect can have intersex defects. In the group of patients at the University of Missouri, approximately 15 per cent had ambiguous genital development, including three cases of true hermaphroditism and various other confusing genital abnormalities.

Although it is usually in the more severe degrees of hypospadias, such as the peno-scrotal or perineal, that a serious suspicion of ambiguous sex should be entertained, any degree of hypospadias demands the exclusion of female genital-tract structures or gonadal tissue. This is particularly true if on palpation of the under surface of the penis one notes an apparent deficiency of the corpus spongiosum, or if there are not two testes of appropriate size and consistency in the scrotum. Although perineal hypospadias may occur in a male child, it is emphasized that the burden of proof is upon the physician.

Thompson and Baker say that in every case of hypospadias the examination should include nuclear sexing, preferably from more than one tissue. A genitogram, the retrograde injection of a radiopaque solution into the urogenital sinus or the uretheral opening of the hypospadias, should be carried out to demonstrate the size and shape of any urogenital sinus, vagina or other structure such as cervix,

* Thompson, I. M., and Baker, J. J.: Hazards of hypospadias. MISSOURI MED., 65:301-304, (Apr.) 1968.

uterus or tubes. Endoscopy must also be done to determine the presence or absence of a prostatic urethra and to explore any unusual finding in the genitogram. The authors also recommend excretory urography because of the increased incidence of anomalies in the urinary tract in patients with hypospadias. They state emphatically that if the genitogram is abnormal and if gonads are not present in the scrotum bilaterally, chromosome analysis and 17-ketosteroid excretion studies should be done promptly, to establish the more appropriate sex for the rearing of the child and also to avoid confusion in the family regarding the actual sex of the youngster.

In addition to children referred with hypospadias and the problem of ambiguous external genital development and appropriate assignment of sex for rearing, the authors encountered a wide variety of other congenital anomalies of the genitourinary tract. They included cryptorchidism, bifid scrotum, renal agenesis, duplication of ureters, etc. Non-urologic defects were present in 19 per cent of the patients, and mental retardation occurred in almost 10 per cent of them.

Meatal stenosis is present in so many patients with hypospadias that it is considered a component part of the abnormality. That is particularly true in the more distal types of the condition. Failure to recognize the stenosis and to treat it effectively can result in a troublesome problem of obstruction.

Thompson and Baker point out that there are many hazards, some of them serious ones, confronting those who undertake to treat hypospadias. The problems stem from incomplete or inadequate diagnostic study, from poor surgical technique, and especially from improper follow-up to make certain that the urinary defect has been corrected. They emphasize that it is unwise for anyone who is not completely competent in endoscopy and in the diagnosis and management of urinary-tract obstructions to undertake the correction of hypospadias. Post-repair strictures are not uncommon, and an obstructive uropathy can develop insidiously. It is important that the patient who has undergone urethral surgery be followed meticulously for a number of years to make certain that a stricture is not developing. They urge avoidance of circumcision for the boy with hypospadias, so that the prepuce may be used during reparative surgery.

The consequences of incomplete or inadequate diagnostic study can be serious in children with ambiguous genitalia. Baby girls with the adrenogenital syndrome have been subjected to surgical procedures when all that was necessary was the administration of steroids.

In the treatment of hypospadias, the authors say that operative procedures must conform to the strict disciplines of reconstructive surgery and the basic principles for the correction of abnormalities of the urinary tract. They emphasize that all hypospadiacs differ, particularly those who have already been subjected to inappropriate surgery. Thus the procedure must be tailored to the type of defect and to the tissues available for repair. The objective is to secure a straight penis and a meatus at as distal a position as possible, but above all to achieve a urethra that is unobstructed. The objective can occasionally be accomplished in a single stage, but it is not unusual for it to require two or three successive operations.

From their experience in the management of hypospadias, Thompson and Baker are convinced that the task should never be undertaken lightly. Thorough diagnostic studies are necessary if one is to avoid misinterpreting sex and to recognize urinary-tract abnormalities. Surgical treatment must be fashioned to correct the deformity in the individual case. Follow-up observation must not be neglected if one is to assure normal genital- and urinary-tract function.

Letter to the Editor

Sir:

I thought the compilation of letters in the "Medical History" section of the June JOURNAL the most dramatic exposition of medicine in an earlier day that I have read. Whoever unearthed them and saw their significance should be writing history. He has a keen recognition of events that tell their own story of an age, without commentary.

Sincerely,
FAYE C. LEWIS, M.D.

Webster City
June 8, 1968

ANTIHYPERTENSIVE ACTIONS OF DIURETICS

A very recent report by a group from Harvard Medical School on a double-blind study of the antihypertensive actions of diuretics should be of great interest to clinicians.* The report tells of a comparative study of separate and simultaneous administrations of hydrochlorothiazide and spironolactone (an aldosterone antagonist) in the management of a group of hypertensive patients. Their results suggest that the giving of a combination of these diuretics can render hypertension more readily manageable.

The study group consisted of 11 patients with sustained hypertension—10 with essential hypertension and one with chronic glomerulonephritis. All had retinal changes, but none of them exhibited uremia or congestive heart-failure. During the period of study there was no restriction of sodium in the diet, and there was no supplementation of potassium.

The program of study consisted, consecutively, of (1) administration of a placebo for approximately four weeks; (2) administration of 50 mg. hydrochlorothiazide tablets t.i.d. for a period of four weeks; (3) a four-week period during which only the placebo was given; (4) administration of spironolactone for a period of four weeks (Initially this was given in a dosage of 100 mg. q.i.d., but later in the study a new product was administered in a dosage of 25 mg. q.i.d.); and (5) a final period of one month during which both hydrochlorothiazide and spironolactone were administered.

At each visit a technician—the same one each time—who was unaware of the medication the patient was currently receiving, took blood pressures at intervals of a few minutes during a period of at least 30 minutes with the patient recumbent. The two lowest pressures obtained in a study period were averaged to represent the basal blood pressure.

In addition to blood-pressure determinations, plasma-volume measurements were made after intravenous injection of I^{131}-labeled human serum albumin, and serum sodium and potassium levels were determined by flame photometry. Also, the pressor response to norepinephrine and angiotensin, and the depressor response to a ganglion blocking agent were determined in some of the patients.

The results of the study indicated that hydrochlorothiazide and spironolactone, in the doses used, each reduced the systolic blood pressure an average of 20 to 30 mm. Hg during the various experimental conditions—during the basal state, and during infusions of norepinephrine, angiotensin and a ganglion blocking agent. The authors deduced from their study that "since the combined effect of these two drugs is independent and additive, the drugs together produce a mean systolic blood-pressure decrease of about 40 to 50 mm. Hg. The diastolic effects are similar for hydrochlorothiazide and spironolactone, with a 10 mm. Hg decrease for each, and a mean decrease of about 20 mm. Hg for the two together."

During the period when the patients were on hydrochlorothiazide, there was a highly significant decrease of serum potassium, but contrastingly there was a highly significant increase of potassium while the patients were taking spironolactone. There appeared to be a significant interaction between the two drugs, indicating that the effect of either one on the level of serum potassium depends on whether the other is or is not present. When they are given together, the increase in the level of serum potassium is very similar to the increase produced by spironolactone alone. There was a significant decrease of serum sodium in patients receiving spironolactone, and a highly significant reduction in plasma volume was attributed to each drug. There was no evidence of interaction of the two drugs when given together, either upon the serum sodium or upon the plasma volume.

According to the authors, no adverse side effects were observed during spironolactone administration. One patient developed gout while undergoing hydrochlorothiazide therapy. While taking both drugs three patients complained of constipation and also of intermittent leg cramps.

The authors point out that the use of an orally administered, effective diuretic has be-

* Winer, B. M., Lubbe, W. F., and Colton, C.: Antihypertensive actions of diuretics. JAMA, 204:775-779, (May 27) 1968.

come a cornerstone of the medical management of hypertension. When administered alone, a thiazide reduces systemic blood pressure by approximately 10 per cent, and also increases the hypotensive effect of other hypotensive drugs. From this study it appears clear that spironolactone can achieve a similar degree of antihypertension without occasioning the adverse effects of thiazides on serum potassium, glucose and uric acid levels. The results obtained by giving thiazide and spironolactone together indicate that a reduction in basal blood pressure is equivalent to the reduction achieved when either is administered alone. Through the use of such combined therapy, a significant reduction in the dose and the side effects may be obtained, making hypertension more readily manageable.

Although the administration of a combination of drugs in the treatment of hypertension would appear superior to the use of one drug alone, patients so treated will continue to need careful follow-up. The possibility of adverse side effects, hyperglycemia and hyperuricemia must still be kept in mind, and the levels of serum potassium should be followed. In the use of potent drugs, one must not forget the admonition, "Non nocere!"

ANTIMETABOLITES IN THE TREATMENT OF PSORIASIS

There has been considerable controversy in dermatologic circles over the use of antimetabolites in the treatment of psoriasis. One school of thought insists that it is unjustifiable to employ a drug as highly toxic as methotrexate in the treatment of a disease as benign as psoriasis. They point out that there have been reports of deaths from that form of treatment, even when administered for only short periods of time, and reports of irreversible liver damage have also been made. In other centers it is contended that until safer and equally effective therapeutic agents become available, the use of methotrexate is warranted in patients with severe and disabling psoriasis and in the management of psoriatic arthritis.

Apropos this controversy, a Letter to the Editor in THE LANCET for April 20 deserves the attention of those concerned with the treatment of this chronic and frequently baffling malady. McDonald and Bertino, of the Department of Medicine and Pharmacology at the Yale University School of Medicine, have asserted in that letter that they have been so impressed by the large number of patients with severe and debilitating psoriasis who have been enabled to return to active and useful roles in life after treatment with antimetabolites that they would be loath to deny them the benefits of such therapy.

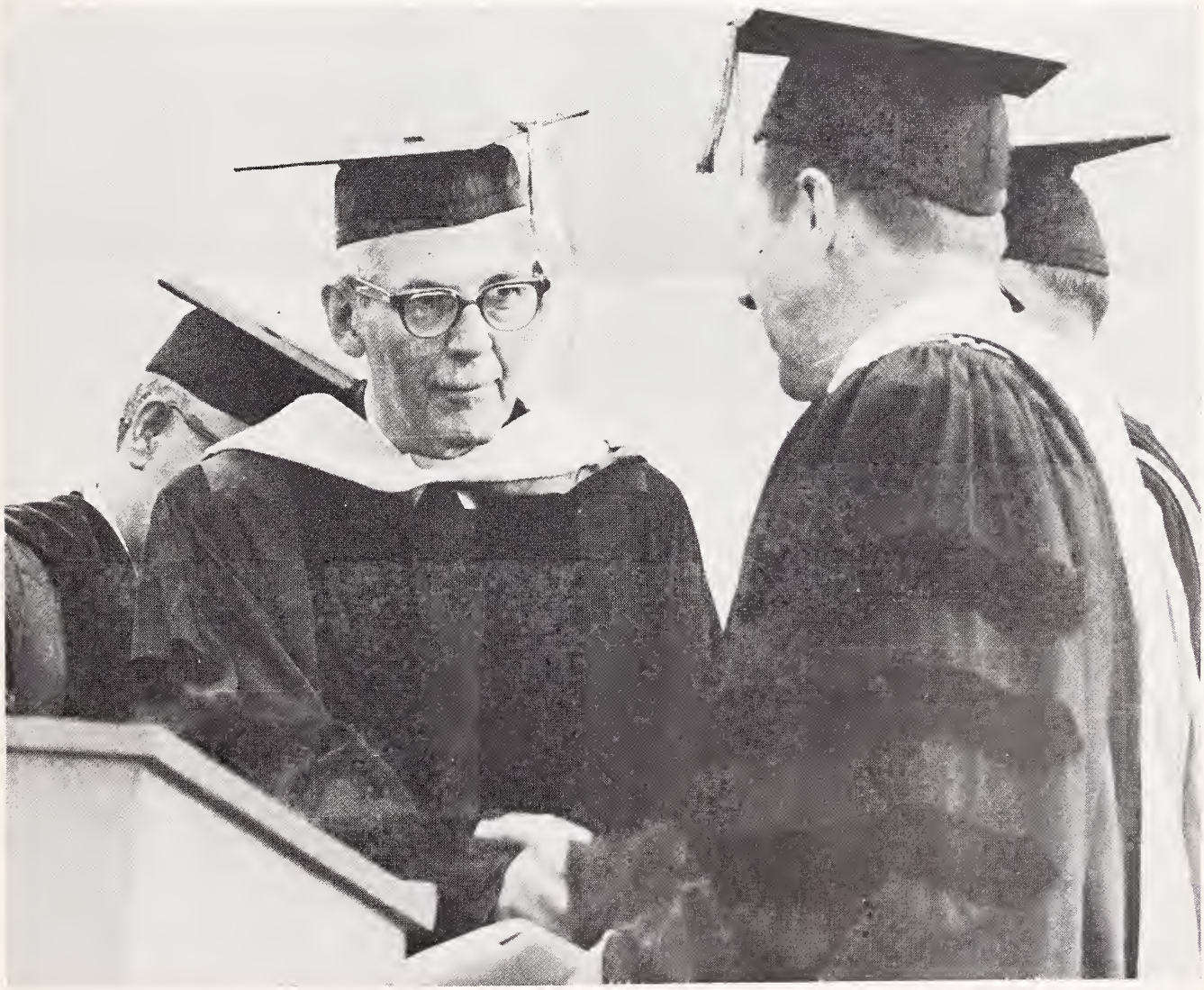
According to McDonald and Bertino, most of the deaths have occurred in patients having systemic disease or in those who had been maintained on systemic corticosteroids. They also point out that in most of the deaths of which they have knowledge, and which were thought to have been the result of methotrexate toxicity, as well as in the most severe complications of this form of therapy, the patients were taking small daily doses of the drug by the oral route—2.5 to 5.0 mg./day of methotrexate for 5-10 days or more.

The Yale physicians state that in those patients and others so treated, the pharmacology and toxicology of the drug have been ignored. It has been recognized that the effects of methotrexate are directly related to the period of time that cells are in contact with the folic-acid antagonists. The longer the exposure, the more severe the resulting cellular toxicity. When the drug is given orally, it is metabolized over a longer period of time than when it is administered parenterally. When given orally, excretion of the drug is incomplete after 24 hours, and it is almost continuously in contact with cells. When the drug is administered parenterally, it is given intermittently and it is excreted in a shorter period of time. It is for those reasons that small daily doses of the drug tend to induce greater cellular toxicity than large, intermittent parenteral doses.

McDonald and Bertino report that in their experience the results of oral and of parenteral forms of therapy have been about equally ef-

ficacious, the results of intermittent parenteral administration being perhaps slightly better. There also are certain other advantages of using the parenteral route. It provides better dose-control; it eliminates the problems of self-medication and consequent error; it provides an opportunity for checking the blood count before the administration of each successive dose; and it avoids cumulative toxicity.

On the basis of their experience with methotrexate in a variety of proliferative diseases, the authors make a strong plea for the abandonment of the usual practice of giving small doses of methotrexate daily in the treatment of psoriasis. By giving the drug parenterally, they feel that the severe toxicity can be reduced strikingly. They recommend that in patients with normal liver and kidney function, 25 to 50 mg. of methotrexate be given weekly, twice monthly or even once per month. That regimen, they say, is usually sufficient to control the disease without adverse effects.



At its commencement exercises on May 24, Grinnell College conferred the honorary degree of doctor of science upon Dennis H. Kelly, Sr., M.D., scientific editor of this JOURNAL. Dr. Kelly is shown being invested with the Grinnell College hood, and being congratulated by President Glenn Leggett. A 1918 alumnus of Grinnell, Dr. Kelly took his M.D. at Northwestern University Medical School, interned at Cook County Hospital, received pediatrics training in Boston, and practiced for 27 years in Des Moines, before illness forced his retirement in 1955. He is a member of the Grinnell College Advisory Council.

MEDICAL ETHICS

RECENT OPINIONS OF THE AMA JUDICIAL COUNCIL

LAW AND ETHICS

September 16, 1967

The following statements are intended to clarify the inter-relationship between law and ethics.

1. Ethical standards of professional conduct often exceed but are never less than those required by law.
2. Violation of governmental laws may subject the physician to civil or criminal liability. Expulsion from membership is the maximum penalty that may be imposed by a medical society upon a physician who violates ethical standards involving a breach of moral duty or principle. However, medical societies have a civic and professional obligation to report to the appropriate governmental body or state board of medical examiners credible evidence that may come to their attention involving the alleged criminal conduct of any physician relating to the practice of medicine.
3. Although, a physician charged with alleged illegal conduct may be acquitted or exonerated in civil or criminal proceedings, this does not discharge a medical society from its obligation to initiate a disciplinary proceeding against a member with reference to the same conduct where there is credible evidence tending to establish unethical conduct.
4. Ethical pronouncements of the Judicial Council and the House of Delegates should not be so interpreted, construed or applied as to encourage conduct which violates a valid law.

GUIDELINES FOR PHYSICIANS IN THEIR RELATIONS TO COMMERCIAL ENTERPRISES

September 16, 1967

It is demeaning to the medical profession for a physician to permit the use of his name and professional status in the promotion of commercial enterprises. A physician may freely engage in business ventures outside the practice of medicine. However, out of respect for his profession, he should not allow his name or the prestige of his professional status as a physician to be used in the promotion of commercial enterprises.

November, 1967

QUESTION: Under the guidelines relating to commercial activities adopted September 16, 1967, would it be improper for a physician who owned a fishing lodge or vacation spa to advertise to the general public that it is owned and operated under the direction of a physician? (or that it is owned and operated under the direction of Dr. John Brown or John Brown, M.D.?)

ANSWER: The guidelines adopted by the Council state that a physician should not allow his name or the prestige of his professional status as a physician to be used in the promotion of a commercial enterprise. The physician is free to engage in business ventures outside of the practice of medicine, but such business ventures should not be permitted to trade on the reputation and standing of the medical profession. The public might well be misled by this type of advertisement into the belief that the physician's business operation is in some way medically beneficial, that the physician provides medical supervision or care, or that it is better than the competitor's because it is owned by a physician.

Whether justified or not, the plain fact is that the layman might well so reason, and conclude that the reference to the physician-owner indicates superiority and perhaps health benefits.

The physician's colleagues also may well contend that such advertisement is a patent solicitation of patients and, therefore, unethical.

For the foregoing reasons, it is the opinion of the Judicial Council that the advertisement would not be in the best interests of medicine and therefore would be improper.

November, 1967

QUESTION: May a physician accept a gift such as a radio, a compact refrigerator, or the like from a manufacturer or a distributor of drugs, remedies, appliances or services for prescribing these products for his patients?

ANSWER: No. This amounts to rebating. It is ethically improper because it could influence the physician to prescribe the donor's product. If a product or service is prescribed for its effectiveness, it would be preferable that it be discounted so that the patient, rather than the physician, benefits.

ETHICAL RESPONSIBILITIES IN PRESCRIBING DRUGS AND DEVICES

March 12, 1967

It is unethical for a physician to be influenced in the prescribing of drugs or devices by his direct or indirect financial interest in a pharmaceutical firm or other supplier. It is immaterial whether the firm manufacturers or repackages the products involved.

It is unethical for a physician to own stock or have a direct or indirect financial interest in a firm that uses its relationship with physician-stockholders as a means of inducing or influencing them to prescribe the firm's products. Practicing physicians should divest themselves of any financial interest in firms that use this form of sales promotion. Reputable firms rely upon quality and efficacy to sell their products under competitive circumstances, and not upon appeal to physicians with financial involvements which might influence them in their prescribing.

Prescribing for patients involves more than the designation of drugs or devices which are most likely to prove efficacious in the treatment of a patient. The physician has an ethical responsibility to assure that high quality products will be dispensed to his patient. Obviously, the benefits of the physician's skill are diminished if the patient receives drugs or devices of inferior quality.

Inasmuch as the physician should also be mindful of the cost to his patients of drugs or devices he prescribes, he may properly discuss with patients both quality and cost.

PRESS RELEASES

November, 1967

QUESTION: Is it proper for the physician to discuss his patient's medical condition, disease or illness with the press?

ANSWER: A physician's obligation is to his patient. The physician reports to the patient. However, a patient by virtue of his position may have an obligation to others. If so, he must know and discharge that obligation (to the electorate or to the stockholders or to others to whom he is responsible). The physician should insure the medical accuracy of any authorized report.

The physician may not discuss patient's health condition with the press or the public without patient's consent or in the event of his incapacity, the family's consent.

November, 1967

QUESTION: Is it ethically proper to publish studies concerning the health or illness of public figures after their death?

ANSWER: Most scientific-medical articles, case studies, case reports and clinico-pathological reports are based on actual medical experiences with patients. Medicine does not find it necessary to identify these patients. While one need not condemn those who, after the death of public figures, discuss the medical condition of those people while they were alive, respect for the dignity of man, respect for the deceased, and respect for the medical profession strongly suggest that only some clear and meaningful benefit would justify such discussion.

TRANSFERS OF PATIENTS' RECORDS

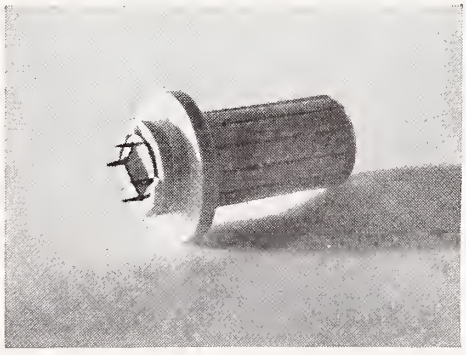
November, 1967

QUESTION: May a physician, retiring from practice, ethically sell his patients' records to another physician?

ANSWER: No. A physician's records have been developed during the physician-patient relationship. According to Section 9 of the Principles of Medical Ethics, a physician may not reveal the confidences entrusted to him in the course of medical attendance. The physician's records summarizing these confidences are cloaked with this same protection. To transfer a patient's records without his consent would violate this confidence. Further, to *sell* records would tend to make a patient subject to barter the highest bidder. For the patient's benefit, however, but only with his con-

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sent, these records may be transferred to a physician of his choice. A reasonable charge for secretarial or duplicating service connected with such transfer is not improper.

A physician may not ethically *purchase* such records from a retiring physician or from the estate of a deceased physician.

PROFESSIONAL COURTESY

June 17, 1967

The custom of professional courtesy embodies the ancient tradition of fraternalism among physicians in the art which they share, and their mutual concern to apply their learning for the benefit of one another as well as their patients. The Judicial Council reaffirms and endorses the principle of professional courtesy as a noble tradition that is adaptable to the changing scene of medical practice.

Professional courtesy is not a rule of conduct that is to be enforced under threat of penalty of any kind. It is the individual responsibility of the physician to determine for himself and within his own conscience to whom and the extent to which he shall allow a discount from his usual and customary fees for the professional services he renders, and to whom he shall render such services without charge as professional courtesy.

The following guidelines are offered as suggestions to aid physicians in resolving questions related to professional courtesy.

1. Where professional courtesy is offered by a physician but the recipient of services insists upon payment, the physician need not be embarrassed to accept a fee for his services.
2. Professional courtesy is a tradition that applies solely to the relationship that exists among physicians. If a physician or his dependents have insurance providing benefits for medical or surgical care, a physician who renders such service may accept the insurance benefits without violating the traditional ethical practice of physicians caring for the medical needs of colleagues and their dependents without charge.
3. In the situation where a physician is called upon to render services to other physicians or their immediate families with such frequency as to involve a significant proportion of his professional time, or in cases of long-term extended treatment, fees may be charged on an adjusted basis so as not to impose an unreasonable burden upon the physician rendering services.
4. Professional courtesy should always be extended without qualification to the physician in financial hardship, and members of his immediate family who are dependent upon him.

CHARGING PENALTY FOR OVER-DUE ACCOUNTS

November 26, 1966

Since the practice of medicine is a profession and not a business, the practices adopted by businesses are not necessarily suitable for professional practice.

It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note or to charge a penalty on fees for professional services not paid within a prescribed period of time nor is it proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection.

PHYSICIAN'S CHARGES FOR ADMITTING PATIENTS TO HOSPITAL

The attention of the Judicial Council has been called to a practice which appears to be new and novel. Some physicians in several scattered parts of the country are charging patients an "admission fee" to a hospital. On inquiry, patients have been advised that this is the physician's fee for making arrangements to have patients admitted to a hospital.

The Principles of Medical Ethics provide that a physician should limit the source of his professional income to *medical services* actually rendered by him, or under his supervision, to his patient.

It is the opinion of the Judicial Council that the practice of charging a separate and distinct fee for the incidental, administrative, non-medical service the physician performs in securing the admission of a patient to a hospital is not in keeping with the traditions of the American Medical Association and is to be disapproved as unethical.

Lawn Mower Accident Reports Requested

The Accident Prevention Section of The University of Iowa's Institute of Agricultural Medicine is again seeking the help of Iowa physicians in a continuing study of riding rotary power lawn mowers.

Two children in Iowa have died this spring from accidents involving the more complicated and larger mowers. A 10-year-old girl was killed when a lawn and garden tractor overturned in a ditch on a county road where she was driving, and a four-year-old child died when a mower was backed over him. Data gathered last summer on 45 accidents included one fatality and seven severe injuries received by children when mowers were backed over them. Six of those children suffered amputations.

Physicians who treat patients who have been injured by riding mowers can report them to the Institute staff members, and they will make follow-up investigations of the accidents. All information is kept confidential. The investigative phase of this U. of I. research is sponsored by the U. S. Public Health Service.

A proposal to help you manage congestive heart failure patients:

Initiate therapy with **Hydromox*** Quinethazone 100 mg. (two 50 mg. tablets) daily for 15 days



Many patients in congestive heart failure may obtain the greatest benefit from HYDROMOX Quinethazone when it is given in a single daily a.m. dose of 100 mg. (two 50 mg. tablets). Diuresis is usually rapid and effective in reducing symptoms within the first critical days. We suggest continuing clinical evaluation over a 15-day period of therapy. If results are satisfactory, a reduction to 50 mg. (1 tablet) daily will usually be adequate for maintenance.

Precautions: Electrolyte abnormalities may be aggravated or produced. Caution is important during prolonged or intensive therapy and when salt intake is restricted. Hypokalemia has been mild and infrequent, and other electrolyte abnormalities rare. The possibility of potassium depletion and its toxic sequelae must be kept in mind, particularly in cirrhotics and patients receiving digitalis. As a preventive measure the use of foods rich in potassium, such as orange juice, may be desirable. Although not a thiazide, HYDROMOX may possess certain characteristics of the thiazides. They have been known to cause jaundice with liver involvement and pancreatitis; hematological complications such as purpura with or without thrombocytopenia and leukopenia (neutropenia); increases of serum uric acid; decreased glucose tolerance as evidenced by hyperglycemia and glycosuria thus aggravating or provoking diabetes mellitus and azotemia in patients with renal disease; photoallergy. Discontinue use a few days prior to elective surgery. When added to a regimen that includes ganglionic-blocking agents, the dosage of these latter preparations should be reduced. Also reduce dosage when one or more of these antihypertensive agents is added to an established HYDROMOX regimen. Contraindicated in anuria. Observe for possible hematologic complications.
Side Effects: Skin rash; gastrointestinal disturbances (chiefly nausea), weakness, dizziness. These seldom require cessation of therapy, and can be relieved by reducing dosage or correcting electrolyte imbalance.
Warning: Enteric coated potassium tablets have been implicated in small bowel lesions and should be used only when adequate dietary supplementation is not practical.

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University Hospitals DRUG LETTER

Drugs in Pregnancy

CLIFFORD P. GOPLERUD, M.D., and
G. H. MILLER, M.D.

Large numbers of pregnant women often receive many drugs in addition to routine vitamin and iron supplements. Some women also may receive drugs in the second half of the menstrual cycle during which conception occurs and, of course, not realize that a pregnancy exists.

The stage of pregnancy at which a drug is administered may be the most important factor as far as the ultimate outcome is concerned. Its importance lies in the fact that some drugs may be teratogenic, whereas others present problems only by their pharmacologic effects. Some of these effects may not be significant for the fetus but may create serious complications in the neonate. From the standpoint of non-teratogenic pharmacologic effects, the human fetus and neonate must of course be regarded as quite different from the adult.

Enzyme systems of many body organs, and possibly the placenta, play an important role in the detoxification of drugs. Interference with or deficiency of one or more of these enzyme systems may produce a toxic effect or exaggerate a normal physiologic or pharmacologic effect. In the normal fetus the orderly development of tissues and organs proceeds with an equally orderly development of various enzyme systems. The fetus and newborn may, therefore, have certain patterns that are relatively deficient in the infant and/or adult. The reverse is also true—i.e., the older infant and adult have enzyme systems that are known to be absent, deficient or immature in the fetus and newborn.

No matter what transfer mechanism is involved, essentially every type of substance can and does pass from maternal to fetal blood. With respect to drugs, the question is whether the rate of transfer is rapid enough so that the amount of drug reaching the fetal circulation becomes of pharmacologic importance. Most of the drugs which may be given to a pregnant woman appear to be transferred across the placenta by simple diffusion. The rate of transfer is related in part to ionization and lipid solubility—i.e., the drugs transferred most rapidly are nonionized molecules with a high lipid solubility. In addition, within certain limits the rate of diffusion of a substance is inversely proportional to its molecular weight. In each instance where appropriate studies have been made, it has been found that drugs cross the placenta rapidly and in significant amounts.

Most organs have a period of particular susceptibility to teratogenesis. That period very likely coincides with an early and critical developmental event in that organ, although the event need not be structurally evident. For example, the critical teratogenic period in the human embryo is between days 15 and 25 for the nervous system; from 24 to 30 for the eye; from 24 to 36 for the legs; and from 20 to 40 for the heart.

Toxicity of the drug on the fetus may be a direct effect of the drug or the effect of a metabolite. The effect may also be indirect, through changes in maternal and/or placental physiology. Some drugs have no ill effect on the fetus, but may have a significantly adverse effect on the neonate.

CYTOTOXIC DRUGS

A. Anti-folic acid drugs will cause abortion early in pregnancy and a variety of malformations later. In the third trimester they may cause intrauterine death. Only in rare instances are these drugs indicated for maternal disease.

B. Antipurines and alkylating agents have been used during pregnancy for leukemia and Hodgkin's disease, but most such patients have been treated after the first trimester. With possible rare exceptions, no anomalies have been reported that can be specifically related to these drugs. Some of the newborns have had leukopenia. These drugs should not be used in the first trimester if they can be avoided.

HORMONES AND DRUGS INFLUENCING ENDOCRINE-GLAND FUNCTION

A. *Sex steroids.* (1) Androgens and anabolic agents have caused permanent clitoral hypertrophy in the female fetus. (2) Progesterone and its derivatives apparently cause no abnormalities. However there is little if any indication for the use

Dr. Goplerud is a professor and Dr. Miller is a resident in the Department of Obstetrics & Gynecology at the U. of I. College of Medicine. This article appeared initially in the June, 1967, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. Materials from DRUG LETTER are reprinted here at the suggestion of the Clinical Pharmacology Committee at the University and with the permission of the authors.

of these drugs. (3) Estrogen could cause some changes in the male fetus, and the synthetics have been implicated in reports of masculinization of the female fetus. There is little, if any, need for the use of these drugs. (4) Gestogens, particularly those containing norethindrone, have been responsible for masculinization of the female fetus. There is no indication for these drugs during pregnancy.

B. *Insulin and oral hypoglycemics.* (1) Insulin probably has no specific direct effect on the fetus. Severe and especially prolonged maternal hypoglycemia, however, can have an adverse effect on the fetus. (2) Oral hypoglycemic drugs have not proved teratogenic. They could cause neonatal hypoglycemia or lactic acidosis.

C. *Oxytocin* probably has no biologic effect on the fetus, probably because the amount reaching the fetal circulation is so low.

D. *Corticosteroids.* Cortisone given in early pregnancy may increase the possibility of cleft palate. If so, the risk is very small. The analogs have not been associated with anomalies. The neonate may develop adrenal failure. One neonatal death has been reported following this complication.

E. *Thyroid.* (1) Thyroxin, either endogenous or exogenous, does not affect the fetus adversely. (2) Antithyroid drugs of the thiouracil group readily cross the placenta and interfere with thyroxin synthesis. If the maternal level of thyroxin is low, the fetal pituitary gland will produce more thyroid-stimulating hormone (TSH) and lead to goiter formation, with possible tracheal obstruction. There may be a systemic effect associated with mental deficiency in the offspring. In the last trimester, use of these drugs may cause the offspring to be a cretin. Hyperthyroidism in the neonate may follow the use of these drugs.

F. *Iodides.* With moderate or prolonged use, these may bring about the development of a goiter in the fetus, as do other antithyroid drugs. Other drugs should be substituted for iodide-containing compounds during pregnancy.

G. *Radioactive iodine* should not be used for treatment or diagnosis of thyroid disease during pregnancy. In instances where radio-iodinated serum albumin (RISA) is used for placental localization, the mother is given a single dose of potassium iodide to protect the fetal thyroid. Newer radioactive substances are now being investigated for use in placental localization.

H. *Antibacterials.* (1) Sulfonamides diffuse readily across the placenta and, except in rare instances, have no adverse effects on the fetus. In the newborn, however, they increase the chances of kernicterus, since they compete for albumin binding sites and therefore enhance the diffusion of bilirubin into the tissues. This enhancement is particularly prominent with the long-acting sulfas, and is especially significant in premature infants. (2) Penicillin G and V cross the placenta very quickly. Penicillin G has also been injected directly into the fetus at the time of intrauterine transfusion for the purpose of avoiding amnionitis. There are no known immediate untoward reactions. (3) Ampicillin has been shown to cross the placenta. Although no untoward effects have been reported, the true incidence of toxic effects is yet to be determined. (4) Streptomycin and dihydrostreptomycin cross the placenta rapidly. There are a few reports of ototoxicity in infants born of mothers receiving these drugs for tuberculosis. (5) Novobiocin probably causes no trouble in the fetus. In the newborn, however, it may inhibit conjugation of bilirubin and does enhance the possibility of jaundice. (6) Tetracycline and its cogeners cross the placenta readily and are known to cause discoloration of teeth in the baby, as well as hypoplasia of the enamel. Growth of long bones may also be inhibited. Death from hepatic failure has been reported in pregnant women given high doses of these drugs, especially when given to renal-disease patients. (7) *Chloramphenicol* crosses the placenta with less facility than many of the other antibiotics. The concentration in the fetus probably is not great enough to cause the "grey syndrome" (seen in neonates given this drug in dosages of 100 mg./Kg. of body weight) unless the mother has received very high doses of this drug. (8) Nitrofurantoin sodium (Furadantin) has been given to many pregnant women. There have been a few reports of hemolytic disease in the newborn following its use in pregnancy.

I. *Antihistamines and anti-emetics.* (1) Meclizine and cyclizine have been subjects of much discussion in the literature over the past few years. Both drugs cause fetal anomalies in certain animals. The big danger is the fact that these drugs are sold over the counter. FDA regulations now state, however, that they must be labelled "not for use during pregnancy unless prescribed by a physician." (2) Phenothiazines were reported previously to cause liver toxicity in the neonate, but recently they have been exonerated. In fact some of them may actually stimulate the glucuronyl transferase system in the liver of the newborn.

J. *Other drugs.* (1) *Drugs used for hypertension during pregnancy.* Most thiazide diuretics, at one time or another, have been incriminated as the cause of thrombocytopenia in the newborn. The incidence must be very low, however, since such a high percentage of pregnant women receive one or more of these compounds during pregnancy. It is feasible also that these drugs could cause electrolyte imbalance in the newborn. (2) Reserpine and other rauwolfia alkaloids may cause a syndrome in the newborn characterized by lethargy, bradycardia, hypothermia and nasal congestion. (3) Hexamethonium is used very little any more, but it may cause ileus in the neonate. Ganglionic-blocking drugs should not be given to pregnant

women. (4) Although magnesium sulfate has a marked effect on the myoneural junction, it does not cause respiratory depression in the newborn. (5) Any hypotensive agent may cause too marked a drop in the maternal blood pressure and subject the fetus to anoxia.

K. *Vitamin K analogs.* Menadione and related products increase neonatal jaundice when large doses are given to the newborn or to the mother shortly before delivery. This effect probably is caused by hemolysis of red cells and impaired clearance of bilirubin. It does not occur when natural Vitamin K_1 is used. The effect may represent one of the occasional situations in which the baby has a glucose-6-phosphate dehydrogenase or a glutathione-reductase deficiency as well as inhibition of bilirubin metabolism.

L. *Cardiac glycosides* have been given to large numbers of pregnant patients for varying periods of time. There has been no difficulty reported in neonates from these drugs.

ANTICOAGULANTS

1. *Heparin* crosses the placenta in very small amounts because of its high molecular weight and because it is highly ionized. To date there have been no known difficulties with the fetus when the mother has received heparin.

2. *Coumarin derivatives* cross the placenta very rapidly. There may be fetal or neonatal deaths from multiple hemorrhages.

ANALGESICS

1. *Salicylates* seem to cause no difficulties, except in the rare instance where the baby has a glucose-6-phosphate dehydrogenase deficiency or in the rare case of a bleeding tendency in the neonate.

2. *Phenacetin* can produce methemoglobinemia in the newborn. In conventional amounts, however, it is not harmful during pregnancy, except in primaquine-sensitive individuals. Salicylates are preferable to phenacetin.

NARCOTICS

1. *Morphine* readily crosses the placenta. This is obvious from the respiratory depression that may occur in the newborn. It is even more obvious when one considers the fact that the offspring of a narcotics addict may become addicted *in utero.*

2. *Meperidine (Demerol)* and other synthetic narcotics all cross the placenta with the same facility as morphine, and may well be responsible for fetal respiratory depression.

3. *Levallorphan tartrate (Lorfan) and nalorphine (Nalline)* are useful narcotic antagonists, but they are also depressive. The antagonistic effect may be short, and when completed, further depression may ensue.

ANESTHETIC AGENTS

All the anesthetic gases cross the placenta. The rates of transfer vary from compound to compound. Cyclopropane, for example, can be demonstrated in the fetus within 90 seconds after initial administration to the mother. There may be a diminution of the respiratory rate in the newborn, depending upon the amount of anesthetic given to the mother.

Lidocaine and mepivacaine are probably the most frequently used local anesthetic agents used in obstetrics at the present time. They reach the fetus in about 10 minutes. High levels in the maternal plasma have been associated with neonatal depression. There are also reports of certain "caine" drugs causing methemoglobinemia in both mother and fetus.

HYPNOTICS

Various hypnotic drugs are given to the mother before labor. Many of them also are used during labor, or for complications such as toxemia of pregnancy. All cross the placenta, but the rates at which they cross are varied. Chloral hydrate, paraldehyde and barbiturates have some depressive effect upon the fetus, but if given in appropriate dosages they usually do not cause severe respiratory depression. There are some physicians who think that the mother delivered under sodium pentothal will have a baby they can recognize in the nursery for several hours or for a day or two afterwards. Such babies may respond well when stimulated, but otherwise they are often extremely drowsy.

ANTICONVULSANTS

Diphenylhydantoin sodium (Dilantin) may cause hypertrophy of the clitoris in female children. Recently there was a report of a female neonate born with clitoral enlargement thought to be secondary to amino-glutethimide (Elipten) taken by the mother during pregnancy.

SUMMARY

It is a stroke of good fortune that the large number of drugs—especially anti-emetics—used in the first trimester of pregnancy in this country during the past 10 years have been non-teratogenic. The pharmacologic effects of a drug on the neonate may be entirely different from those on the mother. Those effects can be responsible for prolonged as well as immediate morbidity for the neonate.

The wise physician will markedly restrict the drugs he prescribes for his patients throughout all stages of the pregnancy.

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Iowa Association of Medical Assistants

Love—A Teacher's View

SISTER MARY LENZ
Sioux City

When Sister Jordan, our college president, asked me last February whether I would be willing to speak to you today, my first response was one of bewilderment—the topic was so vast; where would one begin? But as I reflected on it and especially after I realized that you wanted us to approach it relative to our respective professions, it seemed that the best way to discuss this topic would be to give a philosophy of teaching as I have worked it out in my own life. My remarks will therefore be my personal view and will not represent any consensus of teachers; necessarily though I am approaching this as a teacher, my womanhood and my commitment as a religious sister will also enter though I think this commitment is basically that of a Christian; I am first and foremost a Christian woman—one who shares the life of Christ.

In these remarks I shall be considering love as a relationship to another; this must be founded on a love of self, a feeling of basic security within oneself and acceptance of oneself, so that one is free to reach out to others. However, today I am presuming a basic healthy relationship to self and will concentrate on the relationship to other human beings—and in my profession these are primarily students, fellow teachers, administrative personnel, and staff members. Since the college exists primarily for its students, I shall center my remarks on my relationship with them, though these could be readily transferred to other members of the college community as well as other members of the civic and world community.

Relationship with others must be based on a reverence for each person; each is a person of worth and dignity, either potentially or actually. No one possesses all of the truth; each possesses one unique aspect that no one else has. I remember a student whom I met several years ago who was against the world and everyone in it—and she showed it in the way her chin jutted out, the way she glowered at all about her or completely ignored them. Somehow or the other the two of us got together during subsequent years, as she learned that she could love and be loved in return. This discovery made all the difference in the world to her. Today she is a successful teacher, sharing with others the love that she realized was present within her. But it all began with a basic reverence for herself as a person having value, even though many others found her highly disagreeable. This implies a willingness to accept the person as a totality—to accept her completely as she is at that moment.

Trying to live this conviction that people are individually worthwhile, I want to share with them the joy of love. As a Christian I want to get to know and to love Christ better, and I feel that my basic apostolic mission is to bring Christ to others and others to Christ—and that the best way to do this is to show them the love of Christ in action. Most likely you are familiar with the expression made even more popular by the folk song: "God Is Love." One day I suddenly realized the implications of that statement: God is love; therefore, love is God; the love that I share with others and receive from them in return is a participation in God himself. Maybe some people feel that God is dead today because we Christians are not really loving; we are not really sharing with them the joy and the love of Christ.

Sharing the joy of love with one another, we try to build a community together. Literature shows us that one of the fundamental longings of twentieth century man is for understanding, for love, for community. Repeatedly literature portrays the isolation of modern man and his yearning to get beyond his state of isolation to one of "belonging, of feeling at home with people who need him and who know that he also needs them." This capacity for helping people feel at home requires that we be ready to listen and really to hear what they are saying, to be really present to each person as we confront that person. Being present implies more than physical presence; it implies the giving of my whole being to the service of that particular person at that time. Maybe it is devoting my full attention to a question the person is asking, but at that time it is my total responsibility. Recently, Mark Van Doren, the American man of letters, was on the Briar Cliff campus, and he stressed the necessity for courage to live the present moment totally and completely, as being basic to love.

Sister Mary Lenz is chairman of the English Department at Briar Cliff College, Sioux City, and she made this presentation at the 1968 annual meeting of the Iowa Association of Medical Assistants.

Thus far, I have discussed three basic principles that govern my relationship with students—a reverence for each, an attempt to share the joy and love of Christ with each, and an attempt to establish community, in some degree, with them. Looking at it in a slightly different way, I might well summarize this philosophy of teaching as it relates to love in the following quotation that I found in a student's paper: "Love is the courage to hope, the ability to dream, the capacity for acceptance, the desire for life, the determination to be oneself." That particular quotation is meaningful to me because I have experienced with students the growing awareness of these capacities as they began to realize love within themselves. Experiencing this awakening of the realization of love within a person is one of continued suffering, but it is also one of great joy. Suffering accompanies love; the price is high but so is the reward.

In sharing some of these basic principles, I have also briefly mentioned how they have been present in my teaching, but now I should like to turn specifically to the teaching area. As a teacher I have a two-fold responsibility to the student—to him in the classroom and to him outside of the classroom.

In the classroom, I have a basic responsibility to concentrate on the content of the course. But first and foremost is the fact that I am teaching not subject matter, but students. The subject matter, which in my case is literature, is the basis of the dialog that is carried on, and I am convinced that in the field of literature there must be dialog in the classroom. My responsibility as a teacher is to provide an environment for the most effective learning. This means providing the kind of experiences with literature that will help the student understand what literature is, what it is saying, and how it is saying it. Students have a right to expect the teacher to provide the situation in which they can assimilate the needed information, but they have the right to expect something more —the impetus to accept responsibility for the learning that takes place inside themselves. This requires confrontation with values as experienced in character, in situation and in theme, as these are presented in literature. And this confrontation is made more meaningful to the student if he is actively involved in the learning process—if he enters into discussion or other responses to literature.

One of the significant ideas I discovered this year—and it is terribly commonplace though it just became real to me this year—is the fact that students are very much afraid. One day, realizing that really good discussion in which everyone participates stimulates much more meaningful learning than a limp, teacher-initiated monologue, and at the same time realizing that worthwhile discussion was not happening as a matter of course, I wondered how much fear was a part of the problem. During the next class period I confronted the students with this issue, and the majority, without much urging on my part, admitted quite frankly that they were afraid. Of what they were afraid was not quite clear, but they were afraid, and their fear impeded open, frank discussion. Discussion in that particular class did not improve in any startling way, but the comments which students made afterward brought home to me the full impact of that discovery. I feel that if we teachers could find the means to help students feel secure in classroom discussions, we would have gone a long way toward helping them face other fears in their lives.

One way to alleviate fear is the establishing of ground rules for the conduct of the class, the establishment of discipline which facilitates relaxed and orderly interaction. Initially, a disciplined structure might seem to impede, but soon all discover greater ease when each knows what is expected. Then the basis for a good friendly rapport has been laid.

For these things to happen in the classroom, there must be an atmosphere in which we can trust each other. Trust is absolutely basic. No, I have never really achieved it, but it is the ideal toward which I keep striving, and each new group brings new insights and new challenges.

Basic to all of this is the student's realization that the teacher cares about him. This message is conveyed in many subtle ways, but it is probably made most explicit in the contacts outside of the classroom. One basic tenet is availablity—a kind of open-door policy as much of the time as possible. At the beginning of each course, I emphasize to the students that I am there to serve and that they should feel free to contact me outside of the classroom. Then when students come, practice must support the assertion. At times, pressures urge one to be a bit abrupt or not to be totally present to the person. This undercuts all of the emphasis on availability and loving concern that has been preached in words. If there are other responsibilities which demand our attention, with all honesty and consideration we tell the person so, and try to arrange another time to discuss the question at hand or possibly refer him to another counselor.

It is so important that each relationship be one of genuine respect. Early last fall, having to arrange small group meetings for approximately 300 students on three different dates, I was nearly frantic and close to losing patience when I received nearly 20 phone calls in close succession asking for changes in the schedule. Then I realized that it really was unfair to take out on the fifteenth caller the fact that fourteen others had called before him. Each situation was unique to the caller, and deserved a respectful answer. I am not saying that one must be a door-mat on which everyone can wipe his feet. Love requires

firmness—but a firmness that is based on an attitude of concern.

Several times this year students were in trouble because of our Independent Reading Program, of which I am chairman. In nearly every case it was the student's negligence which had occasioned the difficulty, but I found out that if I asked them "What would be best for you?" they responded to the situation much more positively than they would if I had imposed a punishment on them. A penalty would have evoked a defensive response from them, but this way the students assumed responsibility for their negligence, and in most cases were harder on themselves than I would have been. But again, they could tell that the question came from one who cared.

Basic to the idea of availability is being someone who is able to listen. Many times students just need to know that someone cares enough to listen. Then they can articulate the concerns that are welling up inside of them, and merely objectifying these concerns by putting them in front of someone else is often enough to restore their peace of mind. But the important thing is the capacity to listen, not to be ready with the quick answer that neatly solves everything, but to listen with one's whole being and to hear what the person is saying in words and in all of the other ways there are of communicating. Sometimes the most important things are those that are not said.

I suppose I might summarize my whole philosophy of teaching and of living in three words—words that are overlapping and mutually interrelated—give, love, share! And in some ways sharing is an even more important part of love than is giving. Sharing implies that I am ready to receive as well as to give. Without this mutual giving and receiving, love cannot long survive in a vital, growing way. And it is often much more difficult to receive than it is to give, because receiving implies a receptivity, a need on my part, and so many of us are too independent to admit that we have needs. Often the greatest act of love is to receive from another person, or at least to be ready to receive.

I should like to close with a kind of examen on the ways of being at peace with others—which of course implies being in love with them.

Do I try to be cheerful and pleasant with all I meet?

Do I try to adapt myself to the moods of others, rather than require them to adapt to my moods?

Do I see each of my brothers as a gift of God to me?

Am I totally present to others?

Do I give them my total attention?

Do I really listen to them?

Do I really believe that I can learn from everybody?

Do I really believe that I need others, and that they need me?

A Noble Pledge

To be so strong that nothing can disturb your peace of mind.

To talk health, happiness and prosperity to every person you meet.

To look at the sunny side of everything and make your optimism come true.

To think only of the best, to work only for the best, and expect only the best.

To be just as enthusiastic about the success of others as you are about your own.

To forget about the mistakes of the past and press on to greater achievements of the future.

To wear a cheerful countenance at all times and give every living creature you meet a smile.

To give so much time to the improvement of yourself that you have no time to criticize others.

To be too large for worry, too noble for anger, too strong for fear, and too happy to permit the presence of trouble.

ANON

Plan immediately to attend

MEDICAL ASSISTANTS'

MIDSUMMER SEMINAR

July 20-21

Ramada Inn, Iowa City

Highway 218 North, and Interstate 80

Woman's Auxiliary News

From the President

GREETINGS! The presidential feet are sore and the dresses all—er—sprung across the posterior middle. There has been much plodding across air terminals and sitting in meetings, all most interesting.

The Sheraton-Schroeder Hotel, in Milwaukee, was the scene of the Wisconsin Auxiliary meeting on May 13, 14 and 15. The theme of the convention, "Everything's Coming up Daisys," was carried out on the badges of the hostess county and the pages, and there was even a pot of daisies at the door of the Wisconsin hospitality suite.

The luncheon speaker on the first day was Mr. Paul Boesch, of Houston, Texas, who brought valuable hints on the "Womanly Art of Self Defense," stressing that women should be constantly on the alert. He gave simple and practical suggestions for protecting oneself against would-be molesters and intruders into the home.

The May 15 luncheon honored the delightful and articulate Mrs. C. C. Long, president-elect of the Auxiliary to the AMA, and the national group's representative to the Wisconsin conclave. Her theme for next year will be "Make Your Membership Count," and her obvious dedication to the Auxiliary promises that she, at least, will fulfill her motto. During luncheon there was a fashion show by Hixons. Mrs. James Sargent, earlier installed as the Wisconsin Auxiliary's new president, closed the occasion with an inspiring inaugural address.

The Wisconsin ladies are an active and aggressive group. Their state division of AMPAC they call PACE—Political Action Committee for Education. They are gathering the sheaves for AMA-ERF too, and their contribution for the past year was almost $10,000.

They were gracious and charming hostesses, and left me in no doubt as to my welcome. Everywhere I met interest and consideration, and for their kindness to me, I am most grateful.

Charm and grace were in full measure at the next meeting, too. The Iowa Association of Medical Assistants met at the Holiday Inn, in Sioux City, on May 18 and 19, and had kindly invited me to come as their guest. I was most anxious to be there, since our own Jeanne Green assumed the gavel as president. Attending the convention were about 85 ladies who help in various capacities in doctors' offices throughout the state. They were most serious in their determination to improve their efforts to help our husbands in their daily activities, and had arranged educational sessions conducted by physicians and other professionals. Sunday's program was a thought-provoking panel entitled "What Is Love?" Excerpts from their program will be published on the Medical Assistants' page of the IMS JOURNAL, and I hope you all will read them. I am most grateful to those warm and talented ladies for their thoughtful hospitality to me, and I salute them for their dedication to their work.

Ozark Airlines took me from Sioux City to Chicago for the Fortieth Annual Meeting of the Illinois Auxiliary, at the Sherman House on May 20, 21 and 22. Since Illinois was marking its 150th birthday, each officer and guest received a beautiful artificial Doctor's Wife rose corsage, in addition to which the guests received sesquicentennial medals.

There were general business meetings, a movie clinic, round table sessions and social functions, all moving with well-organized precision. There was time for an evening trip on the town, but the Michigan Boulevard shops didn't get all the attention they expected.

The busy and devoted Mrs. C. C. Long was there, too, and gave another of her inspiring messages.

There were many fine presentations at the Illinois convention, but one in particular impressed me. It was by Dr. James W. Turpin, author of VIET NAM WAR. In his teens, that young American physician-teacher, "striving for that inward sensation we all seek," had talked of becoming a medical missionary to the Chinese people. While a junior in high school he was granted a "local license" to preach, and before graduation he was serving five rural churches, visiting each every fifth Sunday. Now as a physician-missionary he has served in war-torn Viet Nam, and his experiences there have led to his efforts to enlist help in his *Project Concern*. Money, bandages, and medical supplies are among the many things Project Concern seeks to gather for the people of Viet Nam. Mrs. Turpin must be a very philosophical woman. With her husband away in the Orient so much, she has now enrolled as a student in medical school, concluding, I suppose, if she can't lick 'em, she'll join 'em.

Another highlight of the convention was a skit by the Kankakee County Auxiliary at an Open House honoring members-at-large. "I Married a

Doctor" had the shine of a near-professional performance, and was greeted with much enthusiasm.

Mrs. Alden Rarick, in her inaugural address, made this statement: "It is comforting to know that we can build on the efforts of those who have served before us. I am sure that Mrs. Spellberg (the retiring president) can now feel a sense of accomplishment for the year just completed. Sophocles said, "One must wait until the evening to see how splendid the day has been."

Sophocles does not need my endorsement as a wise man, but I shall pay him the compliment of stealing his thought. In the evening of my first visits as your president, I can "see how splendid the day has been." Meeting the warm and wonderful people who were so nice to me has been a great part of my "splendid day."

—LENOR BISHOP (MRS. JAMES F.)

AMA-ERF Exceeds Goal

This has been a great year for AMA-ERF in the Iowa Medical Auxiliary. It marks our first success in achieving the goal set for us by National. This year the goal was $4,500. We not only reached it but exceeded it by $606.90, collecting a total of $5,106.90.

This year, certificates were awarded on a per-capita basis. Wright County won first with a per-capita gift of $15.94; Buchanan was second with $12.38; and North Lee third with a per capita gift of $10. Congratulations to each of those counties for a job well done.

We are looking forward to another successful year. It is not too early for all of us to make plans for fund raising for AMA-ERF. It is the only organization in the world set up to help both the doctor of today and the doctor of the future.

—BERNIS WICKS (MRS. RALPH)
Chairman, AMA-ERF

Around the Hawkeye State

Buchanan County

The Woman's Auxiliary to the Buchanan County Medical Society sponsored its first benefit dinner-dance at the Gayla Ballroom, in Independence, this spring. All proceeds will be used by the Auxiliary to help equip and furnish a room at the new People's Memorial Hospital which is now under construction. Contributions to the "Wishing Well" were for the Pediatrics Department. Over 350 persons attended the ball. Music was furnished by the Bill Miller orchestra, of Waterloo, and additional entertainment was provided by two folk-singers, students at the University of Northern Iowa.

Various committees of the Auxiliary were in charge of the dinner, the dance, the decorations and the ticket sales.

Dallas-Guthrie

The Dallas-Guthrie Medical Society and its Auxiliary enjoyed a dinner party in May at the Midway Lounge, in Guthrie Center. Dr. and Mrs. D. W. Todd, Dr. and Mrs. Herbert Neff, and Mrs. Adele Thornburg were hosts.

The Auxiliary met at the home of Mrs. Todd following the dinner. The society members remained at Midway for a program, with James Hopkins, M.D., a Des Moines pediatric surgeon, as guest speaker.

Polk

The following officers of the Woman's Auxiliary to the Polk County Medical Society were installed recently at a meeting held at Holiday Inn South in Des Moines: Mrs. Ralph Dorner, president; Mrs. Floyd Burgeson, president-elect; Mrs. James H. Dickens, first vice-president; Mrs. Lawrence O. Ely, second vice-president; Mrs. Charles N. Hall, recording secretary; Mrs. Henry H. Corn, treasurer, and Mrs. Robert C. Jones, corresponding secretary.

Pottawattamie

The Pottawattamie County Medical Auxiliary installed new officers following a salad luncheon at the home of Mrs. Jose Martinez, in Council Bluffs. New officers are: Mrs. Charles F. Lowry, president; Mrs. Maurice Margules, president-elect; Mrs. James Conlon, vice-president; Mrs. Robert Westfall, secretary; and Mrs. Martyn Bierman, treasurer.

Mrs. James L. Knott, the retiring president and installing officer, presented each new officer with a red rose. The group presented Mrs. Knott a silver candy dish.

Mrs. Ellis Elected North Central Vice-President

Mrs. Howard G. Ellis, of Des Moines, was elected north-central regional vice-president of the Woman's Auxiliary to the American Medical Association during the National Auxiliary's 45th annual convention in San Francisco during June. Mrs. Ellis is a past-president of the Iowa Auxiliary, and has served as regional legislative chairman, community service chairman, and member of the By-laws Committee.

Active in the American Red Cross for many years, Mrs. Ellis received an Award of Merit for her work in disaster relief during the 1954 floods. She has served on the board of governors of the Des Moines Convalescent Home, on the board of the Camp Fire Girls, and as a workshop leader for the Adult Education Program and the Iowa Recreation Association.

The former Janet Coffin, Mrs. Ellis is a native of Des Moines and a graduate of the Drake Uni-

versity School of Medical Technology. She and Dr. Ellis, a general surgeon, have three children.

Have You Heard?

Janet Ellis, Legislative Chairman

Are We Electing Our Government Representatives by Voter Default? In late 1967 a survey conducted by the Opinion Research Corporation, of Princeton, New Jersey revealed facts which makes this question worthy of serious consideration. It found that 97 per cent of the persons in this country did not work in the election campaigns of either party; that 91 per cent had never been contacted to become registered voters; that 89 per cent had never been contacted to get to the polls on election day; and that 89 per cent had never contributed to a political party.

Lack of Information About Their Elected Representatives Was Even More Startling. It was revealed that 57 per cent could not name their U. S. Congressmen; 41 per cent did not know the party affiliations of their elected representatives; 70 per cent did not know if their representatives were candidates in the coming election; 81 per cent did not know how their congressman had voted on issues directly affecting their area, or whether he had done anything of benefit for their area.

An Iowa Poll, as reported in the DES MOINES REGISTER AND TRIBUNE, showed that only 15 per cent of Iowans have an interest in politics; that only 23 per cent have ever made a contribution to a political party; that 66 per cent have never attended a political rally; and that 89 per cent have never worked actively in a political campaign.

Knowledge of State Legislators and Local Officials Is an Unknown Area to the Majority of Voters. Names, party affiliations, stands on vital local issues, terms of office, etc. are given little heed by the average voter. Few have ever attended a session of their state legislature, and fewer still are familiar with the terms of office and duties of those serving in the executive branch of state government.

The Greeks Gave Us the Word "Politakos," and they also gave us the word "idietes" which meant a man who did not hold a public office or participate in any public affairs. When only slightly one-half of eligible voters participate in a national election, and when the majority of persons do not even know the names of their elected representatives, it would seem that we have allowed our government no longer to reflect majority opinion, but rather to reflect voter default. Have we, perhaps, become what the Greeks would have called "idiots"?

Now Is the Time to Get Our Sons, Daughters, Relatives, Friends, Who Will Be 21 Years of Age on or Before the September Primaries/November Elections Registered to Vote. There are special provisions for enabling persons now serving in the Armed Forces to register and vote. Contact your city clerk's office for absentee voter-registration forms. If you have moved recently, don't forget that you will have to register at your new location.

Who Wants to Be an Idiot? It takes little time or effort to become familiar with the stands of political candidates on vital issues, and to review the state and national platforms of the parties they represent. Voting records of incumbent congressmen are readily available, and they provide valid reflections of their political ideologies. Then when you decide which candidate best represents your beliefs, give him a hand!

Next Month, in "HAVE YOU HEARD": Registration and voter requirements in Iowa.

Iowa Auxiliary Receives Foundation Award

The Woman's Auxiliary to the Iowa Medical Society received an award of merit for its outstanding efforts in the American Medical Association's Education and Research Foundation program in 1967-1968. The presentation was made during the National Auxiliary's 45th annual convention in San Francisco last month.

The Iowa Auxiliary had the greatest percentage of increase of any state in the North Central Region—51.08 per cent, or a total of $5,061.90.

The entire National Auxiliary's contribution was $357,374.78, and it will be given to medical schools for their unrestricted use; to the AMA's Institute for Biomedical Research; and to the AMA medical-student loan guarantee fund. The loan fund enables medical students, interns and residents to get long-term loans at commercial banks, and to make no payments on either principal or interest until five months after they have completed all of their training. Each $100 contribution makes $1,250 in loans available.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

President-Elect—Mrs. D. W. Coughlan, 5410 Grand Avenue, Des Moines 50312

Recording Secretary—Mrs. E. D. Wiley, 30 West Kings Highway, Sioux City 51104

Treasurer—Mrs. J. F. Veverka, Box 324, Prairie City 50228

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Assistant Editor—Mrs. D. A. Mater, 302 South Fourth Street, Knoxville 50138

STATE DEPARTMENT OF HEALTH



ARTHUR P. LONG, M.D., Dr.P.H., COMMISSIONER

May, 1968, Policy Statement on Sex Education in Schools Approved by the Iowa State Department of Health, State Department of Public Instruction and the Iowa Medical Society

It is considered that sex education should be included and be a definite part of the health education curriculum of the elementary and secondary schools in Iowa. Programs of sex education must be carefully planned toward helping students be responsible members of our society. The basic materials included should be scientifically accurate and handled in a highly professional manner. The State Department of Health, the State Department of Public Instruction, and the Iowa Medical Society can provide assistance in the development of such materials.

Sex education is currently being described as education for the masculine and feminine roles in society. Reproduction is only a part of these roles and relationships. Parents have a basic responsibility for sex education; the school, and certain other community agencies have supplemental roles.

In the schools and as part of the curricula, sex education is best taught by the classroom teachers and integrated into appropriate courses, with special counseling as needed. The extent and type of material presented should be integrated with other course materials according to the maturation levels of the children. This instruction should be started in kindergarten and followed throughout the primary and secondary school levels. At all levels, students should receive honest, factual answers to their questions.

For the satisfactory implementation of this policy, teachers at all levels should receive appropriate instruction in the necessary basic principles of natural, physical and behavioral sciences. Subject to the approval of the local county medical society, physicians may be called upon to consult with both teachers and students in the development of and the implementation of a sound program in sex education.

Distribution of Gamma Globulin by the Iowa State Department of Health

The distribution of gamma globulin by the State Department of Health was begun when supplies of it were received without cost. Since then, the policy has been changed and the Department must now pay for gamma globulin, even when it is supplied by the American Red Cross. One purpose for the distribution of gamma globulin is to provide prophylaxis to indigent or hardship persons who have been exposed to certain communicable diseases and who otherwise might be deprived of this preventive measure.

Large amounts of gamma globulin have been used to provide passive protection to persons exposed to infectious hepatitis. Often requests for gamma globulin have been received for administration to women exposed to rubella in their first trimester of pregnancy. Sometimes the material has been requested for other reasons.

Judging from the quantities used in areas from which there have been no reports of infectious hepatitis, we suspect that the gamma globulin may be being used out of habit rather than necessity. Again, we often encounter instances in which gamma globulin has been administered to all the members of a school class in which a case of infectious hepatitis has developed. That practice is of questionable value. Familial contacts of patients with infectious hepatitis are the best candidates to be given prophylactic gamma globulin, if the consensus of authorities is to be believed. The best thinking of the experts is that prophylaxis of rubella with gamma globulin is probably ineffective in preventing maternal viremia, even though the clinical symptoms in the mother may be suppressed. The value of gamma globulin in preventing fetal abnormalities is questionable.

A secondary expected result of the Department's distribution of biologicals is the improvement of disease reporting. Stockpiling biologicals in certain areas has not contributed to better reporting.

Mature consideration of the value of regional stockpiling of gamma globulin has led to a new policy. Gamma globulin will no longer be fur-

nished in quantity to regional depots. Requests for gamma globulin can be made direct to the Department, and they will be honored. This direct requesting will permit assessment of quantities needed, it will yield morbidity reporting and it will permit better surveillance of disease control within the state.

For gamma globulin, please write to the Preventive Medical Service, State Department of Health, or call 515-281-5424.

Morbidity Report for Month of May, 1968

Diseases	May 1968	April 1968	May 1967	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	524	454	717	For the State
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	27	26	206	Dubuque, Jackson, Polk
Whooping Cough	7	2	33	Cerro Gordo, Henry, Washington
Brucellosis	0	1	2	
Chickenpox	583	901	555	For the State
Meningococcal meningitis	1	1	2	Scott
Mumps	1339	1714	770	For the State
Poliomyelitis	0	0	0	
Infectious hepatitis	50	65	28	Benton, Blackhawk, Jackson, Woodbury
Rabies in Animals	17	12	10	For the State
Malaria (Imported)	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	17	9	10	For the State
Syphilis	79	46	81	For the State
Gonorrhea	308	322	236	For the State
Histoplasmosis	1	5	1	Polk
Food intoxication	0	0	0	
Meningitis (type unspec.)	1	0	0	Des Moines
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	4	6	6	Polk, Pottawattamie
Tetanus	0	0	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	1	
H. influenzal meningitis	0	1	0	
Amebiasis	3	2	1	Boone, Dallas, Pottawattamie
Shigellosis	8	2	2	Blackhawk, Linn, Polk
Influenza	0	0	0	

Unmarried Mothers

MADELENE M. DONNELLY, M.D., M.P.H.
Chief, General Health Service

Considerable progress has been made in handling unmarried mothers in the past two or three decades, and yet there remain certain inherent dangers which are becoming impediments in the development of good medical- and social-care programs.

At the beginning of the century unmarried mothers were cared for by the family physician, shrouded in so much secrecy that, really, the girl received only medical care to the degree the family's or individual's finances permitted. We believe we have overcome problems caused by that anonymity, with the result that the general public, the families of the girls, the staffs of the schools and the girls themselves all accept the problems with more equanimity and overtness, and seek help from many disciplines. This change of attitude is to be commended, and it is certainly different from the days when a girl who had become pregnant out of wedlock lost all contact with her friends and the world until the end of her pregnancy.

When social agencies first began working with these girls, there were many lapses in care which resulted in misunderstandings between the doctors and the social agencies. In Iowa we have worked hard on this particular aspect during the last 15 years, holding several meetings of members of the medical profession and with members of organized and voluntary social agencies. At those meetings, case workers and physicians have verbalized their resentments and other feelings, and all in all, have developed a better concept of what each is trying to do.

Too often, though, the doctor is left sitting on the outside of the circle, and consequently he has been unable to participate in the development of plans for the unmarried mother's overall care. The doctor's services and consultation are most necessary, and his recommendations should be incorporated in a care program from the very beginning. He must be an active part of the "team." One school of thought holds that everything between the doctor and the girl must be strictly confidential and must not be relayed to the social agency. Any recommendations or suggestions he has to make are given to the girl, according to that concept, and it is up to her to see that they are carried out. Many workers feel that this is part of the girl's growing up, and she must learn to take on responsibilities. We have no quarrel with that idea, but it must be remembered that many of these girls are not yet grown up, and we cannot expect a 14-, 15- or even an 18-year-old to mature or to learn to assume all the responsibilities of adulthood during the short term of her pregnancy. We believe that many agency people are not told all the facts when the girl returns

from a doctor's visit. These girls, being young and immature, listen only to what they want to hear, and certainly do not convey some of the most serious ones of the doctor's recommendations. Social workers must treat these girls as their own parents would treat them, or if they are in foster homes, their foster parents should play the role of the real parents. There must be unobstructed communication between the doctor and whoever acts in place of the girl's parents, in order to maintain a full understanding of her health care.

A new facet has been injected into the care of the unmarried mother. That is a concerted effort toward the continuance of her education. This means that school personnel must be admitted to the circle. School teachers, school nurses, the school counselor and the school psychologist of necessity will all play a part in her care. Between agencies and medical personnel there may develop a certain resistance to these newcomers. They must be accepted as qualified professional people, and must be permitted to share in all the problems that may arise concerning the girl. We cannot expect to send a pregnant girl to school for several hours a day, and withhold knowledge about her physical or emotional problems from school personnel.

We recognize at this point that school personnel have not had experience in working with unmarried mothers. They must be informed about the physiological and anatomical changes that occur during pregnancy, and their awareness of the need for confidentiality of information must be increased. They must have training which will help increase their knowledge of this special problem if they wish to win the trust and confidence of other professions. Personnel already working in paramedical fields recognize and accept the physician as an authority, and make every effort to follow his advice. All workers must attempt to improve their cooperation with the other professions.

All people involved with the care of a girl pregnant out of wedlock need a definite system for passing on information and returning information. Everyone must forget his own individual problems and work only for the girl. Each of us must recognize that many people are going to be involved in every individual case, and we must allow other professionals to come in and do the work they are best fitted to do. Above all, when we accept a girl for care, her health and the infant in her womb are the two most important factors to be dealt with. We must work together to assure the delivery of a healthy infant from a healthy mother.

Smallpox Vaccination Complication Survey

Iowa physicians reported 138 complications of smallpox vaccination during the first quarter of 1968. Of 3,076 physicians surveyed, 1,800 (58 per cent) returned the questionnaire.

Approximately 29,600 smallpox vaccinations were performed. The number and types of complications reported included 65 accidental infections, 22 generalized vaccinia, 12 eczema vaccinatum, 1 encephalitis and 21 other complications. There were no deaths. The reported complications were more severe and more numerous than those observed by other investigators. These data are preliminary, and may change as more information is obtained by further investigation.

The primary purpose of the survey is to gather information on complications following smallpox vaccination. With additional knowledge, it is possible that the vaccination procedure can be modified in order to reduce the incidence of complications. Vaccination, *per se*, is *not* being discouraged.

Exercises for Maintenance of Joint Mobility

RANGE OF MOTION EXERCISED: KEY TO JOINT MOBILITY includes a variety of exercises to maintain joint motion and thus help patients continue or return to their daily activities. The new 48-page manual (priced at $1.00) is published by the American Rehabilitation Foundation, 1800 Chicago Avenue, Minneapolis 55404. Passive, active assistive, and active exercise methods are covered in the extensively illustrated booklet. Several sequences are appropriate for group use, and group use may increase motivation.

The manual is intended for health-care personnel who plan or carry out range-of-motion exercise programs in hospitals, nursing homes, extended care facilities, or community health settings. Primary consideration has been given to the nurse, who often must assume responsibility in this area without assistance from or consultation with a physical therapist.

An earlier publication, A PROCEDURE FOR PASSIVE RANGE OF MOTION AND SELF-ASSISTIVE EXERCISES, emphasized hand holds and the sequence in which exercises were performed; active range-of-motion was not included. This comprehensive revision uses a functional approach to make range-of-motion exercises easier and more meaningful for both the patient and the nurse.

Authors of the booklet are Patricia Toohey, R.N., B.S., instructor in the Foundation's nursing education program, and Corrine W. Larson, R.P.T., M.S., coordinator of physical therapy education for the Foundation and former physical therapy consultant to local public health nursing and nursing home groups.



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Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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MINUTES OF THE 1968 SESSIONS OF THE HOUSE OF DELEGATES

Iowa Medical Society

Des Moines, Iowa—April 28-May 1, 1968

(Alphabetical Index to the Minutes Can Be Found on Page 792)

SUNDAY SESSION, APRIL 28, 1968

The House of Delegates of the Iowa Medical Society was called to order by the speaker, Dr. Paul M. Kersten, of Fort Dodge, at 9:20 a.m., Sunday, April 28. The House of Delegates approved the taking of attendance by signed registration cards. There were 112 delegates, 8 voting alternates and 21 ex-officio members present.

County	*Delegate*	*Alternate*
Adair	A. J. Gantz	
Adams	C. L. Bain	
Allamakee	B. R. Withers	
Appanoose	E. A. Larsen	
Benton	J. E. Blumgren	
Black Hawk	C. D. Ellyson	
	G. R. Clark	
	D. E. Conklin	
	Fred Dick, Jr.	
	L. L. Zager	
Boone	E. E. Linder	
Bremer	V. H. Carstensen	
Buchanan	L. J. Flage	
Buena Vista	R. E. Mailliard	
Butler	F. A. Rolfs	
Calhoun	R. P. Ferguson	
Carroll	A. D. Anneberg	
Cerro Gordo	L. C. Orton	
	E. D. Kennedy	A. J. Herlitzka
Chickasaw	H. S. Jacobi	
Clarke	H. E. Stroy	
Clay	K. M. Johannsen	
Clinton	M. E. Barrent	
		T. G. Wellman
Crawford	R. A. Huber	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	Richard Schoonover	
Decatur-Ringgold	E. E. Gamet	
Delaware	J. E. Tyrrell	
Des Moines	J. F. Foss	
		F. G. Ober
Dickinson	D. F. Rodawig, Jr.	
Emmet		R. L. Cox
Fayette	R. S. Jaggard	
Franklin	R. E. Munns	
Fremont	F. M. Ashler	
Hamilton	G. A. Paschal	
Hancock-Winnebago	L. R. Fuller	
	S. M. Haugland	
Hardin	J. J. Shurts	
Harrison	J. W. Barnes	
Ida	J. B. Dressler	
Jasper	R. F. Frech	
Johnson	K. R. Cross	
	G. R. Zimmerman	
	C. E. Radcliffe	
		J. C. MacQueen
		A. S. Norris
Jones	L. D. Caraway	
Kossuth	R. E. Jongewaard	
Lee	L. C. Pumphrey	
	G. C. McGinnis	
Linn	R. M. Chapman	
	J. J. Keith	
	H. R. Hirleman	
	W. J. Robb	
	R. A. Sautter	
		D. D. Morgan
Mahaska	G. W. Bennett	
Marion	Peter Van Zante	
Marshall	L. O. Goodman	
	R. G. Robinson	
Mills	M. L. Scheffel	
Monona	J. L. Garred	
Montgomery	Oscar Alden	
Muscatine	J. H. Spencer	
O'Brien	J. C. Peterson	
Page	G. H. Powers	
Palo Alto	H. L. Brereton	
Plymouth	J. P. Trotzig	
Pocahontas	J. B. Thielen	
Polk	J. W. Green	
	J. T. McMillan	
	M. E. Alberts	
	J. H. Kelley	
	A. N. Smith	
	W. R. Hornaday, Jr.	
	W. Rindskopf	
	N. W. Irving	
	J. G. Thomsen	
Pottawattamie	Hormoz Rassekh	
	I. J. Hanssmann	
	M. E. Olsen	
Poweshiek	H. R. Light	
Sac	C. D. Gibson	
Scott	J. F. Bishop	
		A. W. Boone
	Erling Larson	
	C. B. Preacher	
Shelby	J. H. Spearing	
Sioux	L. K. Yates	
Story	G. E. Montgomery	
Tama	A. J. Havlik	
Union-Taylor	R. H. Kuhl	
	R. W. Boulden	
Wapello	R. A. Hastings	
	R. P. Meyers	
Wayne	K. A. Garber	
Webster	H. H. Kersten	
	L. J. O'Brien	
Winneshiek	T. F. Dynes	
Woodbury	P. M. Cmeyla	
	C. L. Beye	
	W. M. Krigsten	
	R. C. Larimer	
Wright	D. A. Harding	

LIAISON DELEGATES

C. V. Edwards, Sr. C. N. Hyatt

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

R. F. Birge	H. J. Smith
C. W. Seibert	L. W. Swanson
P. J. Leehey	P. M. Kersten
V. L. Schlaser	C. J. Smith
T. A. Burcham	R. C. Hardin
J. H. Sunderbruch	S. P. Leinbach
K. E. Lister	O. D. Wolfe
R. L. Wicks	G. H. Scanlon
J. F. Paulson	H. E. Rudersdorf
J. M. Rhodes	C. N. Cooper

Minutes of the April 19, 1967, meeting of the House of Delegates were approved as published in the July, 1967, JOURNAL OF THE IOWA MEDICAL SOCIETY.

The Speaker of the House of Delegates introduced physicians who were serving in the House for the first time, and also the individuals who were seated at the head table. He announced reference committee appointments.

Reports in the 1968 HANDBOOK FOR THE HOUSE OF

DELEGATES were approved as published except the four resolutions beginning on page 89, since they were to be presented at a later time under the heading of new business, and the report of the Subcommittee on Maternal and Child Health which appears on pages 39-42, the report of the Committee on Blood Banking which appears on pages 51-52, the report of the Committee on National Emergency Medical Service which appears on pages 67-68, and the report of the Rural Health Committee which appears on pages 73-76. The reports of the Subcommittee on Maternal and Child Health and the Committee on Blood Banking were referred to the Reference Committee on Legislation and Medical Service, and the Report of the Committee on National Emergency Medical Service and the Report of the Rural Health Committee to the Reference Committee on Miscellaneous Business.

(Following are the reports previously published in the 1968 HANDBOOK FOR THE HOUSE OF DELEGATES.)

Reports of Officers

FROM THE OFFICE OF THE SECRETARY

The Secretary of the Iowa Medical Society is responsible for maintaining membership and dues records; conducting the official correspondence, notifying members of meetings, officers of their election, and committee members of their appointments and duties; and preparing minutes of all official meetings of the Society. All methods of communication are utilized to aid the district councilors in organizing and improving the component societies, and in extending the influence and usefulness of the IMS.

The following paragraphs highlight some of the more important activities of the office of the secretary:

1968 ANNUAL MEETING

The Program Committee has secured an outstanding panel of speakers who will discuss subjects of medical or of socioeconomic interest to all physicians. The complete program for the 1968 Annual Meeting appeared in the March issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY.

The office has cooperated with district councilors in organizing their caucuses in preparation for the Annual Meeting, including organization of the Nominating Committee.

HOUSE OF DELEGATES

Proceedings of the 1967 sessions of the House of Delegates were published in the July, 1967, JOURNAL. The usual administrative procedures in implementing directives of the House of Delegates have occurred. As a part of the 1968 Annual Meeting, the House of Delegates will hold its first session on Sunday, April 28, at 9 a.m. Reference committee hearings will begin as soon as possible, on Sunday, following adjournment of the House. The final session is scheduled for 8 a.m. on Wednesday. House of Delegates meetings will be held at the Savery Hotel.

EXECUTIVE COUNCIL

Three meetings of the Executive Council, the Society's interim policy-making body, have been held since the 1967 Annual Meeting, and a fourth session is scheduled for April 17. The Council has been kept apprised of important IMS projects and activities, and it has taken action, when necessary, on various policy matters. Special newsletters and, more recently, the new IMS REPORT have been utilized to inform state and county medical society officers, delegates, deputy councilors and other leaders about the actions and decisions of the Executive Council, as well as various committee activities and other items of special interest.

JUDICIAL COUNCIL

The Judicial Council has met on three occasions during the past year, and a fourth meeting is scheduled on April 16. J. F. Paulson, M.D., chairman of the Judicial Council, has prepared a report on the activities of that body, which appears elsewhere in the HANDBOOK. The principal responsibilities of the Judicial Council are to approve applications for IMS membership, to decide various questions relating to membership or ethics; and, if necessary, to discipline members of the Society.

BOARD OF TRUSTEES

The Board of Trustees has met on 10 occasions since the last session of the 1967 House of Delegates. It is scheduled to meet in joint session with the Executive Committee of Blue Shield on March 19, and afterward it will conduct two additional regular business sessions, on March 20 and April 16. In addition to formal meetings, the IMS secretary and the staff maintain almost daily contact with the chairman of the Board and/or other officers of the Society.

COMMITTEES

Reports from the 47 standing and special committees of the Iowa Medical Society appear in this HANDBOOK, and some of those committees will also present supplemental reports when the House of Delegates convenes in April. Over 60 official committee meetings have been held in the Society's headquarters building since last April, and several others are scheduled to occur prior to the Annual Meeting. That total does not include informal sessions between committee members and staff, or telephone conferences.

LIAISON WITH COUNTY MEDICAL SOCIETIES

On Sunday, October 22, the Iowa Medical Society and the Iowa Medical Political Action Committee cosponsored a Fall Conference on Public Affairs for county medical society officers and members. A summary of the talks presented at the conference was published in the November issue of the JOURNAL.

As previously mentioned, the Society has developed a new communication, titled IMS REPORT, to relay important information to the members regarding medical affairs. It is being distributed on a regular monthly basis to county medical society officers and others. It is hoped that county society presidents will utilize it to inform their members of current projects and activities of the IMS.

In an effort to provide up-to-date information regarding the administration of Medicare, Medicaid and Blue Shield programs, the IMS, in cooperation with Blue Shield, arranged a series of 14 area meetings last fall for doctors' assistants, and interested physicians.

IMS FIELD SERVICE

The IMS field secretaries, Mr. Gerald Buckles and Mr. Virgil Deering, have traveled throughout the

state to confer with county medical society officers and member physicians on matters of interest to the medical profession. They also visited with representatives of other organizations in the state to promote appropriate interprofessional programs and projects "in the public interest."

MAILINGS

In addition to a voluminous amount of daily correspondence emanating from the headquarters office, a series of special communications were transmitted to the membership, to county medical society officers, to Legislative Contact Men, and others—e.g., News Bulletins, reprints of the JOURNAL's "In the Public Interest" section, special announcements and reports, etc.

NATIONAL, REGIONAL AND STATE CONFERENCES

Following is a list of some of the major conferences and meetings at which the IMS was represented during the past year: AMA—Annual and Clinical Meetings, Conference on Physicians and Schools, Conference on Nursing, Conference on Medical Costs, Public Relations Institute, Conference on the Community and Emergency Medical Services, Congress on Occupational Health, Conference on Health Care for the Poor, Annual Conference of State Medical Society Mental Health Representatives, Congress on Medical Education, Conference on Socio-Economics of Health Care; Conference on Rural Health, Conference on Health Education of the Public, and Regional Workshop on Medicine and Religion; Annual Meetings of the American Association of Medical Society Executives, American Political Action Committee, Iowa Dental Association, Iowa Nurses Association, Iowa Hospital Association, Iowa Veterinary Medical Association, Iowa Pharmaceutical Association and Iowa Academy of General Practice; National Blue Shield Program Conference; IMS/Congressional Delegation Conference; Iowa Blue Cross/Blue Shield Sales Conference; District X Blue Shield Conference; North Central Medical Conference.

IOWA REPRESENTATIVES AT THE NATIONAL LEVEL

The Society maintains close liaison with the AMA at the officer and staff level. Several members of the IMS served on AMA councils and committees, including:

Donovan F. Ward, M.D., of Dubuque, past president of the AMA, and a member of the Council on Legislative Activities.

Donald C. Conzett, M.D., of Dubuque, a member of the Committee on Federal Medical Services, and a liaison representative of that Council to the Division of Indian Health, USPHS, DHEW.

Herman J. Smith, M.D., of Des Moines, a member of the Committee on Federal Medical Services.

E. M. Smith, M.D., of Des Moines, consultant to the Committee on Welfare Services.

John G. Thomsen, M.D., Des Moines, a member of the Committee on Quackery.

R. H. Flocks, M.D., of Iowa City, a member of the Residency Review Committee for Urology and the Interspecialty Committee.

William B. Bean, M.D., of Iowa City, Archives of Internal Medicine.

Dean M. Lierle, M.D., of Iowa City, a member of the Interspecialty Committee.

Four IMS staff members are active in the American Association of Medical Society Executives, and Mr. Donald L. Taylor, the IMS executive vice-president, is a past-president of that organization. Mr. Taylor is chairman of the AMA/AAMSE Liaison Committee, and Miss Tina Preftakes is a member of the editorial board of THE EXECUTIVE, a publication of AAMSE.

SERVICES TO WOMAN'S AUXILIARY

The Woman's Auxiliary to the Iowa Medical Society utilizes the facilities and services of the Society in developing and implementing various projects, with assistance from Mrs. Hazel Lammey, a member of the executive staff. The staff also cooperates with the Auxiliary in arranging its annual meeting and board of directors sessions, in preparing its annual reports, in maintaining its membership records, and in preparing and distributing the WOMAN'S AUXILIARY NEWS.

IMS MEMBERSHIPS

Iowa Medical Society membership for the year 1967 totaled 2,453. Of this number, 222 held active dues-exempt memberships as Life Members, Residents, or Military Service personnel, and 48 Associate Members were likewise exempt from the payment of dues. There were 66 counties (in 62 single or two-county societies) in which 100 per cent of the county society members held membership in the IMS. Physicians ineligible for membership numbered 44, and there were 103 eligible non-members in Iowa. The physicians retired or not in practice decreased to 56. The percentage of eligible physicians holding memberships in the IMS was 96.

The new uniform dues billing and collection form designed by the special committee, following approval of its report to the 1967 House of Delegates, was forwarded to 98 per cent of the county societies for use in 1968. Only two of the larger county societies chose to continue using their own billing forms because of a need for inclusion of additional items for particular society business.

COUNTY SOCIETIES HAVING 100 PER CENT MEMBERSHIP IN IMS IN 1967

Adair
Adams
Allamakee
Appanoose
Audubon
Benton
Boone
Buena Vista
Butler
Cedar
Cerro Gordo
Chickasaw
Clarke
Clay
Crawford
Dallas-Guthrie
Davis
Decatur-Ringgold
Delaware
Dickinson
Floyd
Franklin
Greene
Grundy
Hamilton
Hancock-Winnebago
Hardin
Harrison
Henry
Howard
Humboldt
Ida
Iowa
Jackson
Jasper
Jefferson
Kossuth
Lee
Lucas
Lyon
Madison
Mahaska
Marshall
Monona
Monroe
Montgomery
Muscatine
Osceola
Page
Plymouth
Pocahontas
Pottawattamie
Sac
Shelby
Sioux
Tama
Union-Taylor
Van Buren
Washington
Wayne
Webster
Winneshiek
Worth

1967 IMS MEMBERSHIP RECORD

County	Active Members	Associate Members	Resident Members on Resident License	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage
Adair	1	1	..	..	..	..	100
Adams	4	..	..	..	..	..	100
Allamakee	8	..	..	..	..	..	100
Appanoose	11	1	..	..	..	1	100
Audubon	3	..	..	..	..	..	100
Benton	12	..	..	..	..	..	100
Black Hawk	121	1	..	1	..	1	99
Boone	18	..	..	..	..	..	100
Bremer	15	..	..	2	..	..	88
Buchanan	20	..	..	1	4	..	96
Buena Vista	11	..	..	..	..	..	100
Butler	7	..	..	..	..	..	100
Calhoun	13	..	..	3	..	1	81
Carroll	22	1	..	1	..	..	95
Cass	9	..	..	1	..	..	90
Cedar	8	..	..	..	..	..	100
Cerro Gordo	72	1	..	..	..	..	100
Cherokee	25	..	..	3	8	..	89
Chickasaw	8	..	..	..	..	..	100
Clarke	5	..	..	..	..	..	100
Clay	11	..	..	..	..	..	100
Clayton	7	1	..	2	..	1	64
Clinton	41	2	..	4	2	..	91
Crawford	9	..	..	..	..	..	100
Dallas-Guthrie	23	2	..	..	3	..	100
Davis	12	..	..	..	..	..	100
Decatur-Ringgold	7	..	..	..	..	1	100
Delaware	8	..	..	..	..	1	100
Des Moines	48	2	..	3	..	..	94
Dickinson	8	1	..	..	..	..	100
Dubuque	64	3	..	5	..	..	91
Emmet	12	..	..	2	..	..	86
Fayette	16	..	..	3	..	1	84
Floyd	16	..	..	..	..	..	100
Franklin	7	..	..	..	..	..	100
Fremont	3	..	..	1	..	..	75
Greene	10	..	..	..	..	..	100
Grundy	7	..	..	..	..	..	100
Hamilton	10	..	..	..	..	..	100
Hancock-Winnebago	13	..	..	..	1	1	100
Hardin	14	..	..	..	..	..	100
Harrison	6	..	..	..	..	3	100
Henry	17	..	..	..	3	2	100
Howard	8	..	..	..	..	..	100
Humboldt	6	..	..	..	..	1	100
Ida	4	..	..	..	..	2	100
Iowa	13	..	..	..	1	..	100
Jackson	12	..	..	..	..	..	100
Jasper	20	..	..	..	..	..	100
Jefferson	11	..	..	..	..	1	100
Johnson	227	1	4	19	..	1	93
Jones	11	..	..	2	..	1	84
Keokuk	4	..	..	1	..	..	80
Kossuth	10	..	..	..	..	..	100
Lee	40	2	..	..	..	..	100
Linn	140	9	..	6	..	1	96
Louisa	2	..	..	1	..	..	67
Lucas	5	..	..	..	..	..	100
Lyon	6	..	..	..	..	..	100
Madison	5	..	..	..	..	..	100
Mahaska	17	..	..	..	..	..	100
Marion	14	..	..	3	8	1	82
Marshall	42	..	..	..	..	..	100
Mills	4	..	..	3	3	..	57
Mitchell	11	..	..	1	..	1	92
Monona	9	..	..	..	..	1	100
Monroe	3	..	..	..	..	..	100
Montgomery	11	..	..	..	..	..	100
Muscatine	17	2	..	..	1	1	100
O'Brien	9	..	..	1	..	..	90
Osceola	3	..	..	..	..	..	100
Page	20	..	..	..	7	..	100
Palo Alto	10	..	..	1	..	..	91
Plymouth	11	1	..	..	..	..	100
Pocahontas	6	..	..	..	..	1	100
Polk	336	13	2	6	1	22	98
Pottawattamie	69	..	..	1	..	1	99
Poweshiek	7	..	..	3	..	..	70
Sac	7	..	..	..	..	..	100
Scott	108	..	..	3	..	3	97
Shelby	7	..	..	..	..	..	100
Sioux	13	..	..	..	..	1	100
Story	49	3	..	5	..	1	91
Tama	8	..	..	..	..	..	100
Union-Taylor	14	1	..	..	..	..	100
Van Buren	3	..	..	..	..	..	100
Wapello	42	1	..	1	..	..	98
Warren amalgamated with Polk							
Washington	11	..	..	..	..	..	100
Wayne	2	1	..	..	..	..	100
Webster	55	..	..	..	..	3	100
Winneshiek	11	..	..	..	..	..	100
Woodbury	109	3	..	12	..	..	90
Worth	4	..	..	..	..	..	100
Wright	16	..	..	2	..	..	90
TOTALS	2,394	53	6	103	44	56	96

AMA MEMBERSHIP

The members of the Iowa Medical Society who were active members of the American Medical Association in 1967 numbered 2,333 (including those who were active dues-exempt because of life membership, residency or military service). In addition, 48 held associate memberships in the AMA, and three held AMA service memberships (as physicians working in Veterans Administration Hospitals).

Its 2,333 AMA memberships in 1967 entitle Iowa to three AMA delegates. The 1967 AMA memberships comprised 95.6 per cent of the total Iowa Medical Society membership.

V. L. SCHLASER, M.D., *Secretary*

REPORT OF THE TREASURER

During the 1967 calendar year the expenses of the Iowa Medical Society exceeded income by $5,049.87.

The following financial statements set forth the fiscal status of the IMS as of December 31, 1967.

IOWA MEDICAL SOCIETY

Balance Sheet—December 31, 1967

ASSETS

Current Assets:		
IMS Checking Accounts		$ 1,743.06
CHAMPUS		5,000.00
Notes Receivable (Baldridge-Beye)		750.00
Pension and Disability Insurance Due From Employees		1,322.75
Cash Value of Life Insurance		3,404.41
Total Current Assets		$ 12,220.22
Fixed Assets:		
Land		$ 72,500.00
Office Furniture and Equipment		33,543.53
Building	$308,141.16	
Less: Reserve for Depreciation	34,965.00	273,176.16
Net Fixed Assets		$379,219.69
TOTAL ASSETS		$391,439.91

LIABILITIES AND NET WORTH

Liabilities:	
Notes Payable	$173,682.30
Accounts Payable	1,718.53

Deferred Income	7,371.00
Accrued Mortgage Interest	3,898.65
Accrued Personal and Property Tax	11,000.00
Deferred Compensation	3,404.41
Baldridge-Beye Memorial Fund:	
Notes 12-31-67	750.00
Total Liabilities	$201,824.89
Net Worth:	
Balance 1-1-67	$194,664.89
Less: Net Excess of Expenses Over Income 1967	5,049.87
Balance Net Worth	$189,615.02
TOTAL LIABILITIES AND NET WORTH	$391,439.91

IOWA MEDICAL SOCIETY
STATEMENT OF INCOME AND EXPENSES

For the Year Ended December 31, 1967

Income for the Year 1967:	
Dues—State Society	$269,717.50
Interest on Investments	900.60
CHAMPUS	2,591.24
Miscellaneous	418.70
AMA Collection Commission	1,454.22
Bierring Memorial Fund Contribution	8,666.44
TOTAL INCOME	$283,748.70
Expenses for the Year 1967:	
Annual Session (Net)	$ 1,119.21
Council Expense	2,369.86
County Society Services	2,349.41
Depreciation—Building & Equipment	19,980.00
Dues and Subscriptions	1,784.00
General Administrative Expense	1,827.46
Insurance	2,945.88
Interest Expense	9,482.61
Journal (Net)	11,604.15
Legal Expense	10,044.82
Lights, Gas and Water	5,431.25
Office Sationery & Supplies	6,783.14
Pension and Disability Insurance	5,670.36
Postage	5,307.74
Repairs and Maintenance	4,302.40
Salaries	101,090.92
Service Contracts—Machines	913.98
Taxes:	
Personal and Property	11,825.56
Social Security	4,534.61
Unemployment—Federal	250.46
Use	758.26
Telephone and Telegraph	9,873.23
Travel—Officers	11,721.25
Travel—Salaried Employees	10,792.21
Trustee Expense	2,763.77
Woman's Auxiliary	870.42
Committee Expense	42,401.61
TOTAL EXPENSES	$288,798.57
Net Excess of Expenses Over Income for 1967	$ 5,049.87

THOMAS A. BURCHAM, M.D., *Treasurer*

BOARD OF TRUSTEES REPORT

The reports contained in the HANDBOOK provide a comprehensive survey of the many and varied programs and activities of the IMS during 1967-68. Delegates and alternates are urged to study this material carefully prior to further review and consideration at the Annual Meeting.

The Board of Trustees will present a Supplemental Report to the House of Delegates on Sunday, April 28.

JOHN H. SUNDERBRUCH, M.D., *Chairman*

REPORT OF THE JUDICIAL COUNCIL

At the 1967-1968 Judicial Council organizational meeting immediately following adjournment of the House of Delegates on April 19, 1967, Dr. H. E. Rudersdorf replaced Dr. W. M. Krigsten as councilor for the Fourth District. Dr. Parker K. Hughes was subsequently named to replace Dr. R. E. Wicks as councilor for the Fifth District. Dr. J. F. Paulson was named chairman and Dr. J. F. Bishop was chosen as secretary of the Council at its April 19 meeting.

As is usual at the time of year when this report is written, the Judicial Council has held three quarterly meetings for the transaction of business, since the last previous annual meeting. They took place on July 25 and October 24, 1967, and January 16, 1968. A fourth meeting will take place shortly before the 1968 annual meeting.

The past year has been relatively uneventful for the Judicial Council. The following are two examples of the issues with which the Council has dealt within the past 10 months.

In response to a complaint that an ophthalmologist had attempted to direct patients to a particular optician and had subsequently failed to give those patients prescriptions in proper form, the Council declared that its previous dictum requiring that physicians issue written prescriptions for drugs and permit—indeed direct—patients to take those prescriptions to pharmacists of their choice, applied also to prescriptions for eyeglasses and patients' free choice of opticians. The Council also made it clear that such a prescription must bear the name of the patient and the signature of the physician, and might not be written on a form bearing the name of an optician or firm of opticians.

The Judicial Council reviewed a variant of the Blue Shield Doctor's Service Report proposed for use in cases where two or more physicians are to be paid. In the form that the Council approved, physicians are not invited to indicate a desire for a division of fees on a percentage basis. Indeed, such a division would be unethical. The Council requested Blue Shield to delete the line in which physicians were asked whether or not the patient has other health and accident insurance, its reason being that the physician cannot base his reply on first-hand knowledge, but compliance with that request was not made a condition for the Council's approval of the DSR.

At each of its business meetings, as is invariably true, the Judicial Council was asked to pass upon applicants for IMS membership, and to approve or disapprove the applications of osteopaths for enrollment as "individuals with whom it shall not be considered unethical for doctors of medicine to associate professionally."

The AMA Judicial Council is anxious for state and county medical societies to keep their members mindful of ethical considerations, and it is conducting national meetings and is publishing articles in JAMA in an attempt to focus attention on such matters.

Members of the IMS Judicial Council hope, and indeed they are convinced, that their work aids the medical profession in living up to its ideals. But ethics involve personal, day-to-day decisions by each doctor of medicine, and for ethical problems as for most other difficulties, prevention is the treatment of choice. Consequently, the councilors urge all county medical societies to devote a meeting each year to an ethical issue, so that their members can be reminded regularly of those ones of their responsibilities.

J. F. PAULSON, M.D., *Chairman*

Reports of Standing Committees

ARTICLES OF INCORPORATION AND BY-LAWS

The Committee on Articles of Incorporation and By-Laws has nothing to report at this time. However, if proposed amendments are brought to its attention prior to the Annual Meeting, they will be properly developed for presentation to the House of Delegates.

O. D. WOLFE, M.D., *Chairman*

GRIEVANCE COMMITTEE

During the past year several members resigned from the Grievance Committee and were replaced by new appointees. The new members had an opportunity to participate in some of the most difficult cases which had come before this Committee in its entire existence, and they should be commended for the interest they showed and the valuable contributions they made. Also, the district councilors can be congratulated for the high caliber of their appointees.

As was reported last year, we entered the term with a clean slate and thus had to meet only three times for investigation of 10 cases. Conflicts arising from medical fees and charges have dwindled to the low number of three, but seven grievances dealt with problems of intraprofessional relations and ethics. As in the past, the bulk of the preliminary work fell upon our very capable secretary, Dr. D. O. Maland, who, besides the involved correspondence, had the additional burden of conducting numerous and often irritating telephone interviews. In view of his increasing load, the Committee decided to change its mode of operation and, in the future whenever necessary, assign the preliminary work to one or several other members, hoping thus to achieve a better distribution of the workload.

The cross-index filing of cases has been completed by our secretary, and it will be kept current as additional cases are added to the closed file.

It became very evident to the group that many of our colleagues should be reminded of the importance of proper record-keeping. Concise medical records are a *sine qua non* of medical practice, whether at the office or in the hospital. Trivial complaints—e.g., how often the physician visited the patient or what kind of injection was given—can become the crux around which a grievance revolves, not to mention the legal aspects of correct recording of medical facts and precise clinical notes.

During the past year several articles have appeared in medical journals and daily papers dealing with the functions of grievance committees. We are certain that many Iowa physicians read the article which appeared in an October, 1967 issue of the DES MOINES TRIBUNE on the Polk County Medical Society's grievance committee. It gave a good account of the purpose and functions of professional grievance adjustment. Another article, in the WALL STREET JOURNAL for October 7, 1967, dealt with the same subject. It was well written, but we want to point out that the overall increase of cases —22 to 30 per cent in the past three years throughout the country—was not experienced in Iowa, unless many such gripes were handled at the local level and thus escaped the attention of the IMS Grievance Committee.

The prevalence of complaints involving fees was stressed in earlier reports of the IMS Committee. It was mentioned in the WALL STREET JOURNAL article, but we have seen a steady decline of such cases during recent years in Iowa.

In the April, 1967, issue of the IMS JOURNAL (page 126)—where, unfortunately, the IMS Grievance Committee's credit line was omitted—we tried to illustrate two types of grievances resulting from lack of communication. Our experience has shown that they represent an often repeated pattern. We trust that many physicians have read our page with benefit.

The thought was expressed by some members that the decline in complaints should be credible evidence of an increased awareness of the possibility of misunderstandings. Although the Committee does not claim the laurels, it hopes it has contributed its share of prophylactic education to the profession in this state.

F. O. W. VOIGT, M.D., *Chairman*

COMMITTEE ON HEALTH EDUCATION

The Committee on Health Education maintains close liaison with the State Department of Health on various health education programs, and continues to cooperate with the Health Department in securing speakers for school-health education workshops which are held at the University of Iowa, Drake University, and the University of Northern Iowa. These workshop sessions are attended by school administrators, nurses and teachers for college credit, and are designed to promote sound school-health education programs.

Your Committee chairman has maintained an interest in the Iowa Council on Family Relations, which is interested in developing sex-education programs, and has consulted with that group on a number of occasions. In addition, various members of the Committee have appeared before local Parent Teachers Associations and school groups to discuss subjects related to sex education, and general aspects of family relations, as well as to emphasize the importance of upgrading understanding and knowledge in this area.

Your Committee chairman plans to meet with the Executive Council in April to discuss the feasibility and desirability of the IMS joining with the State Department of Health and the Department of Public Instruction in issuing a statement recommending that sex education be included in and be a definite part of the curricula of the schools of Iowa. Any action taken in this regard will be reported to the membership. The Executive Council will also be requested to comment on the intent of the Committee to distribute to county

medical societies a set of guidelines established by the AMA regarding implementation of selected health-education programs—i.e., sex education, or the broader concept of education for sexuality which includes interpersonal relations as well as sexual anatomy and physiology; the control of syphilis and gonorrhea through case-finding and specific therapy; education for family living with emphasis on family health protection; education that may prevent or control habituation to such noxious or toxic substances as heroin, barbiturates and hallucinogens, marijuana, tobacco, alcohol, and the volatile substances involved in "glue sniffing."

An AMA Conference on Health Education of the Public will be held in Chicago in April, and your Committee chairman has accepted an invitation to participate as a program consultant.

The Committee is responsible for maintaining the IMS Speakers Bureau, and has assisted in securing speakers for a number of lay and professional group meetings and conferences during the past year. The Committee is especially pleased that during the past three years, on request of the Speakers Bureau, many physicians have presented talks on health topics of special interest to young people at the annual Y-Teen Summer Conference which is held in Pella.

Informational pamphlets and films on a variety of health subjects are made available to the public through the IMS. In addition, the Society has assisted radio station WOI, Ames, in the production of a series of health education programs which are broadcast both live and from tape.

C. D. ELLYSON, M.D., *Chairman*

COMMITTEE ON LEGISLATION

Since the 1967 meeting of the House of Delegates, the Iowa Legislature adjourned. A complete report on the actions it took on health legislation was provided to the membership as an "In the Public Interest" article in the September 1967 issue of the JOURNAL OF THE IOWA MEDICAL SOCIETY. In this report, therefore, no attempt will be made to comment on the items considered by the last General Assembly.

All physicians should begin at once to acquaint themselves with the people who are seeking political office during this 1968 election year. The Iowa General Assembly, when it convenes in January, 1969, will once again involve itself with numerous items affecting the health of the citizens of Iowa. As physicians, we have a responsibility to inform legislators as to the position of medicine on these matters. The Committee on Legislation and the highly valuable Legislative Contact Men will be taking an active role in state legislation, but their efforts must be given the added support of all practicing physicians.

The Committee on Legislation calls upon all other committees of the Iowa Medical Society that may be considering items relating to health legislation to formulate recommendations for consideration by the appropriate policy-making body of the IMS, in order that preparations can be made for the next session of the Iowa General Assembly.

NATIONAL LEGISLATION

Only recently, Congress approved several amendments to the Title XVIII (Medicare) and Title XIX (Medicaid) Programs. The American Medical Association and its constituent societies played a major role in shaping that legislation. In the main, the refinements added to those programs were ones which had been recommended by organized medicine. It seems unnecessary to include detailed comment on those changes in this report, for most physicians are aware of them and of how they will affect the doctor's practice.

The President has not yet delivered his "Health Message" to this session of Congress. It is not anticipated that Congress will enact any major health legislation in this political year.

WASHINGTON TRIP

The annual Washington visit, during which IMS representatives meet with the Iowa Congressional Delegation is scheduled for March 8, 1968. On that day IMS officers will have an opportunity to exchange ideas and opinions with Iowa Congressmen relating to health legislation at both the state and national levels.

This trip has been an annual one for approximately 15 years, and has proved very worthwhile not only for the Iowa Medical Society but also, we are told, for the Iowa Congressmen.

J. H. KELLEY, M.D., *Chairman*

NECROLOGY COMMITTEE

The following members of the Iowa Medical Society died during 1967:

	Age
Walter D. Abbott, Des Moines	63
Dean S. Burbank, Pleasantville	81
William B. Chase, Sr., Des Moines	89
William E. Cody, Deerfield Beach, Florida	79
John Connell, Denver, Colorado	81
Dean Curtis, Chariton	65
Thorald E. Davidson, Mason City	72
Jay C. Decker, Sioux City	85
John F. Edwards, Clinton	44
Charles T. Farlow, Farnhamville	82
Eugene B. Floersch, Council Bluffs	65
Thomas R. Gittins, Sioux City	76
Lester R. Hegg, Rock Valley	69
Werner M. Hollander, Bettendorf	56
Placido R. V. Hommel, Elkader	78
Cass T. Houser, Cedar Rapids	88
William C. Huffman, Iowa City	55
George B. Johnston, Estherville	58
Lester C. Kern, Waverly	95
Ralph E. Keyser, Marshalltown	85
Roy G. Klocksiem, Rockwell City	55
Horace M. Korns, Iowa City	74
William S. Kyle, Washington	89
Andrew G. Larson, Dickens	94
Emery W. Lehman, Bluffton, Indiana	78
E. Parish Lovejoy, Des Moines	65
Robert J. McNamara, Dubuque	49
Walter A. Matthey, Bettendorf	82
George A. May, Forest Grove, Oregon	83
Rudolph F. Nielsen, Cedar Falls	64
Ismail M. Ozaydin, Council Bluffs	47
Gerald R. Rausch, Sioux City	57
Alvin A. Rose, Story City	87
Stanley F. Smazal, Davenport	54
Rosalie C. Turner, Nashua	42
Robert A. Weston, Des Moines	88

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The Iowa Medical Society cooperated with the University of Iowa College of Medicine and the Iowa Chapter of the American Academy of General Practice in sponsoring a Fall Postgraduate Course for General Practitioners. The course was held in Iowa City on September 29-30, 1967, and the program was approved for 8 hours' credit by the AAGP.

The Committee was pleased to note that at its 1967 Annual Meeting, the AMA House of Delegates requested the Joint Commission on Accreditation of Hospitals to encourage the hospitals to accept physicians who have been elected or appointed by the medical staffs to their governing boards with full voting rights, as the most effective method of liaison between the medical staff and hospital governing authorities.

Your Committee chairman is also privileged to serve as a member of the Society's Task Force on Medical Manpower. The Task Force will devote attention to the broad area of medical education as it pertains to increasing the supply of physicians for the state.

The IMS continues to maintain close liaison with the University of Iowa College of Medicine through both the Committee on Medical Education and Hospitals and the Task Force on Medical Manpower.

ROBERT N. LARIMER, M.D., *Chairman*

COMMITTEE ON MEDICAL SERVICE

The following matters fall within the province of medical service and are summarized for the interest of the members of the IMS House of Delegates.

1. *Blue Shield Contract Modifications.* The chairman of the Committee on Medical Service and IMS staff members met with Blue Shield representatives early in January to review four new coverages proposed by Blue Shield.

The Blue Shield representatives are to be commended for carrying out a request of the 1964 IMS House of Delegates—that Blue Shield turn to the IMS for guidance and approval (1) when new contracts are being considered; (2) when changes or new interpretations of existing contracts are contemplated; (3) when changes are proposed regarding the philosophy and technique of paying claims, and (4) when information comes to light disclosing abuses of the Plan.

The judgment of the chairman that the proposed Blue Shield coverages are compatible with existing IMS policy has been upheld by the Board of Trustees and the Executive Council. At its January 17 meeting the Council approved a motion "that in light of past recommendations of the House of Delegates and existing IMS policy, the Blue Shield contract proposals be approved in principle, with the understanding that (a) after the formal contracts have been developed they will be provided to the IMS for further study and comment by an appropriate committee and/or the Board of Trustees of the IMS and (b) that a report on this matter be presented to the IMS House of Delegates in April for its information and comment."

The four proposals include:

A. Extended-care-facility coverage. This is applicable only to beneficiaries under 65, and is to be offered at no additional cost. No prior hospitalization is required.

B. Outpatient service coverage, home and office. Of the four proposals, this one carries out to the greatest extent the directive from the House of Delegates to "encourage outpatient and private-office practice." This is to be provided, at the outset, only as a rider on group contracts. It will include coverage for home and office visits, consultations, diagnostic radiology and pathology, immunizations and vaccinations, injections, and physical therapy.

C. Medicare complementary coverage. This would be a new master complementary coverage to pay the deductible or coinsurance features in connection with any professional service provided by Title XVIII.

D. Dental health coverage.

As mentioned previously, it is felt the House of Delegates has approved the intent of these new coverages. It is expected that the attention of the 1968 House of Delegates will be drawn to this matter through the report of the Board of Trustees.

2. *AMA Second National Congress on the Socioeconomics of Health Care, March 22-23, 1968.* This program will have been presented after this report is printed, but before the IMS House of Delegates meets. Thus it may have turned out to be quite unobjectionable, but in advance of the meeting there have been some expressions of concern regarding the content of the program. The concern has centered around an overly heavy emphasis on the closed-panel type of group practice, which is illegal in Iowa and in certain other states. IMS representatives will have attended that AMA Congress.

3. *Veterans' Hometown Care Program.* This program has occasioned one or two questions from member physicians this year, as a consequence of conflicting statements contained in a letter distributed to Iowa physicians by the VA. One portion of the letter indicated that the physician might bill the VA for fees normally charged to the general public, thus implying acceptance of the usual and customary fee philosophy. However another portion of the letter made reference to a fee schedule said to have been "negotiated with the state medical association." Local VA officials have explained that the letter had been prepared at the federal level and was incorrect in seeming to say that fee negotations had been conducted with the IMS.

The discussions that have occurred during this past year with representatives of the Veterans' Hometown Care Program led IMS officers and staff members to think that the VA officials have a good understanding of the usual-and-customary concept, and that they are embracing it to the fullest extent possible. The VA representatives reported last fall that their experience with Iowa physicians under the broadened program had been good. Under this program the doctor is authorized to submit his charge on his own billhead. In a few instances, they said, the information provided in that manner had been too scant, and there had to be some follow-up contacts.

4. *Civilian Health and Medical Program of the Uniformed Services (Champus).* The IMS continues to act as fiscal agent for the Department of Defense in administering this program—the one which is widely known as "Military Medicare." A new and mutually acceptable 12-month contract between the IMS and the Office for Dependents' Medical Care became effective on January 1, 1968.

The administrative work of the IMS in this area has become more complex with the expansion of the program during the past year or so. Outpatient-care benefits for eligible dependents of active-duty personnel have been expanded, and there also have been

increased provisions for inpatient services. Further, coverage under the program is provided to all retired personnel and their dependents, and to handicapped children of active-duty personnel.

As fiscal agent for this program, the IMS paid approximately $360,450 to Iowa physicians during 1967.

5. *Liaison with the Health Insurance Council.* It might be well to report that the HIC has requested an opportunity to meet with representatives of the IMS, possibly in conjunction with the 1968 IMS annual meeting, to discuss matters of mutual interest. An attempt will be made to arrange such a meeting.

G. G. YOUNG, M.D., *Chairman*

MEDICAL-HOSPITAL STATISTICAL SUBCOMMITTEE

Although the Subcommittee has not had occasion to meet formally this year with its counterpart from the Iowa Hospital Association, it may be of interest to mention that half or more of the hospitals that participated in the six-month pilot study during 1966 have continued to make use of the system developed at that time. That continued use of the IMS-IHA-Royal McBee Keysort System has enabled those hospitals to obtain the statistical data they need for reporting purposes.

The delegates will recall that the joint project was undertaken to study patterns of hospital utilization in the state. Statistical studies from the data which was gathered during the pilot period were submitted for the information of the House. Included was information on the number of admissions, number of days hospitalized, diagnoses, ages, charges, etc.

As previously reported, the Iowa Hospital Association has assumed principal responsibility for refining the pilot program and for determining whether it should be continued on any permanent basis. At the present time IHA officials are evaluating alternatives to the Royal McBee Keysort concept. Consideration is being given to an optical reading device which it is felt would increase the accuracy of the raw data and speed up the analysis of the material. The device makes use of a sensitized marking instrument and eliminates manual procedures now required by Royal McBee. It has been reported that data processing equipment now being acquired by a group of IHA hospitals may be made available for any future analysis of material gathered in this project.

Because the groundwork for this project was laid jointly, both organizations have expressed a desire to continue regarding it as cooperative, even though the IHA will undoubtedly carry the bulk of the responsibility.

G. G. YOUNG, M.D., *Chairman*

SUBCOMMITTEE ON MEDICAL PRACTICE IN HOSPITALS AND NURSING HOMES

The Subcommittee on Medical Practice in Hospitals and Nursing Homes is now in the process of being reactivated. The physician who served as its chairman in 1966-67, J. M. Layton, M.D., moved to Arizona last year, and his departure necessitated the appointment of a successor.

At its 1967 meeting, the House of Delegates directed the Society to assume leadership in assessing the standard of care provided patients in nursing homes. It was suggested that this assessment should look into problems such as understaffing, enforcement of minimum standards, inadequate care and low level welfare payments.

Some effort has been expended on this assignment, but the problem has so many facets that additional time will be required. It is possible to report that official bodies of the Society have met on two occasions this year with representatives of the Iowa Nursing Home Association to discuss and evaluate matters of mutual concern. The Society's Board of Trustees met with INHA officials in December, and the Subcommittee on Public Assistance held a similar session in January.

No actual program of action has as yet been proposed, but attention in these sessions has been given to staffing problems, to the limited number of extended care facilities and skilled nursing homes in the state, to ways in which both physicians and nursing home administrators can most satisfactorily and efficiently comply with Title XVIII and Title XIX regulations, to utilization-review activities, etc. Resolution of problems in these areas will require many more such meetings. It is anticipated the Subcommittee on Medical Practice in Hospitals and Nursing Homes will represent the IMS quite frequently in future discussions.

Two representatives of the Society were program participants in a day-long Conference for Extended Care Facilities Administrators held in Des Moines on December 8. The Conference was coordinated by the Iowa Nursing Home Association.

Revised state rules and regulations developed by the State Department of Health and having to do with drug storage and handling in nursing homes were provided to the Society in draft form during the year. These were circulated to the chairmen of several IMS committees, and the suggestions of the committee members, were, in turn, relayed to the Department of Health.

Background information provided by the INHA has been distributed to the members of the Subcommittee. That material included an accounting of the number and location of Title XVIII extended-care facilities and Title XIX skilled nursing homes in the state. It set forth the reimbursement inequities to which the INHA felt its member facilities had been subjected, and it made recommendations as to how the problems might be resolved.

The IMS has a representative on a committee formed by the State Department of Health to plan a series of regional meetings on "The Prevention and Control of Infection in Nursing Homes."

C. B. PREACHER, M.D., *Chairman*

SUBCOMMITTEE ON HOME HEALTH SERVICES

No meetings of the Subcommittee on Home Health Services have been held this year. Still, with extensive provisions for home health care embodied in Part A and Part B of Medicare, there is considerable merit in having a group ready to review matters in this area.

The Social Security Amendments of 1967 altered or expanded some of the Medicare provisions for care in the patients' homes. For instance amendments were passed which permit payment for diagnostic x-rays taken in a patient's home or in a nursing home. These services will be covered under Part B if they are provided under the supervision of a physician and are performed in accordance with proper health and safety regulations.

In Iowa at the present time there are 22 agencies

certified to provide home health services under Medicare. There are approximately six others seeking certification. Legislation passed by the last Iowa General Assembly authorizes county boards of health to seek Medicare certification. Once certified, the counties may secure Medicare reimbursement for services rendered by their public health nurses to eligible recipients. No counties have been certified as yet, but some are studying the possibility.

The Society has continued to participate whenever possible in the State Council on Homemaker Services. As mentioned previously, that Council was established largely through the efforts of the State Department of Health, and it includes representatives of private and public agencies. A subcommittee of that Council has been designated to offer advice to organizations developing applications for grants in the home health and homemaker fields.

W. J. MORRISSEY, M.D., *Chairman*

MEDICO-LEGAL COMMITTEE

No medico-legal matters have been referred to this Committee, and therefore no meetings have been held.

F. E. THORNTON, M.D., *Chairman*

COMMITTEE ON PUBLIC RELATIONS

Although the Public Relations Committee did not have an opportunity to meet during the past year, the chairman has consulted with the staff regarding various Society activities which are "P/R" oriented, and has given oversight to the implementation of ongoing projects which have proved successful in past years.

The following report highlights some of these activities:

Hawkeye Science Fair: The Iowa Medical Society served as a co-sponsor of the 1967 Hawkeye Science Fair which was held last April in Des Moines. Over 600 exhibits developed by junior and senior high school students were displayed. The 1968 Hawkeye Science Fair will be held at the Veterans Memorial Auditorium in Des Moines, April 5-6, and special activities are being planned to recognize the tenth anniversary of this well-regarded educational event. The original impetus for the Hawkeye Science Fair came from the IMS. The other sponsors are the Iowa Medical Foundation, the DES MOINES REGISTER AND TRIBUNE, and Drake University.

State Fair Exhibits: In 1967 the Iowa Medical Society, along with other members of the Iowa Health Council (Iowa Dental Association, Iowa Veterinary Medical Association, Iowa Pharmaceutical Association, Iowa Nurses Association, and Iowa Hospital Association) participated in a Hall of Health exhibit section at the Iowa State Fair under the aegis of the Iowa Health Council. Approximately 100,000 people viewed the educational exhibits in the Hall of Health. Plans are under way by the Iowa Health Council to sponsor a similar project at the 1968 State Fair.

Mass Communications: The "In the Public Interest" section of the IMS JOURNAL continues to be distributed each month to all news outlets in the state, as well as to all Iowa legislators. Subjects discussed during the past year in this section have included the Grievance Committee, the Iowa Medical Foundation, sports medicine, medical manpower, voluntary areawide health planning activities, etc.

Liaison is maintained with local press, radio and television outlets, as well as with Associated Press and United Press International. Attention has been focused on the Society's interest in matters relating to medical manpower, resulting in favorable new stories and editorial comment. The Annual Meeting provides opportunity for concentrated radio, television and press coverage, and every effort is made to capitalize on that opportunity to inform the public on advances in medical science, as well as programs and projects of organized medicine.

The Medical-Radio-Press Code of Cooperation is in the final stages of revision. The original Code was developed by the IMS in cooperation with the Hospital and Nurses Associations, as well as with appropriate press and radio groups. It is being up-dated for distribution to members of these organizations. The Code has proved valuable and useful in the development of sound medical news reporting practices at the local level.

The IMS continues to cooperate with radio station WOI, Ames, in the production of programs in which physicians discuss various health topics and problems. The programs have been broadcast both live and on tape.

Community Health Week: In 1967, Community Health Week was observed from October 15 to 21. Special materials were sent by the AMA to county medical societies in order to assist them in developing special projects during this period, and the IMS released an appropriate news story calling attention to this special observance.

Medical Manpower: The chairman of your Committee also serves as a member of the Society's Task Force on Medical Manpower. In an effort to apprise the public of the medical manpower situation in Iowa, the IMS is in the process of developing a "State of Health Care in Iowa" report to be released in the late fall of 1968, as a special section in the DES MOINES SUNDAY REGISTER. Other professional and health-oriented groups are being invited to share in the sponsorship of this project.

Last spring, the IMS provided a copy of the AMA medical careers resource booklet, "Horizons Unlimited," to the principals of all secondary schools in the state. The booklet consists of two main sections: "Medicine as a Career" and "Careers Allied to Medicine." As a result of that initial mailing, the Society has filled many individual requests for additional copies.

The traditional Senior Medical Student Conference, sponsored by the IMS, was held in Iowa City on January 27, 1968. The Conference provides an opportunity for officers and Committee personnel to summarize the key professional and public service projects which are implemented by the IMS. The program affords the Society the chance to bring into focus for the students the "P/R" problems that will confront them in their individual practices. Wives and guests of the students also attended the conference, and a dinner-dance which was held in the evening at the University Athletic Club. Student reaction to the program was excellent.

Representatives of the IMS attended the Annual AMA Public Relations Institute in Chicago, August 24-25.

The Committee wishes to call attention to the following statement which was included in a letter sent to all members of the IMS last fall by the president of the AMA and the president of the IMS: "The public relations of medicine depends on how you and your office aides serve your patients, and how you perform as a citizen."

The Committee intends continuing to utilize all means available to enhance the prestige and stature of the medical profession.

M. E. ALBERTS, M.D., *Chairman*

COMMITTEE ON INTERPROFESSIONAL ACTIVITIES

During the past year, the IMS Committee on Interprofessional Activities met on two occasions with a similar Committee of the Iowa Pharmaceutical Association. At the first meeting, on November 8, 1967, the discussion primarily centered on generic prescribing, physicians dispensing, and clinic or group-practice pharmacies in which physicians have direct proprietary interests.

In reference to generic prescribing, it was noted that the American Pharmaceutical Association favors generic prescribing and professional fees for pharmacists. The AMA's position is that physicians should be free to use either generic or brand names in prescribing drugs for their patients, and it encourages them to supplement their medical judgments with cost considerations.

In this connection, it should be noted that a bill (S 2299) introduced during the last session of Congress by Senator Long, of Louisiana, and including provisions for the establishment of a national drug formulary for all welfare programs administered under the Society Security Administration was defeated. Instead, the Department of Health, Education and Welfare is to make a study of all medical, social and economic issues involved in the bill, and report to Congress no later than January 1, 1969. A similar drug bill (S 17), introduced by Senator Montoya, of New Mexico, was also defeated. However, recent reports indicate that Senator Montoya will reintroduce his bill. It would authorize the furnishing of drugs under the voluntary health insurance phase of Part B, Medicare, and would impose the formulary concept and a price schedule.

At the first joint meeting of the IMS and IPhA Committees, it was also acknowledged that the IPhA has taken an action in support of the Hart Bill, which would strengthen antitrust laws by "prohibiting the payment to or receipt by persons licensed to engage in the practice of medicine of profits, rebates, refunds, commissions, discounts, rentals or other valuable considerations in connection with the supply of drugs, devices or other projects prescribed by such licensees." IPhA representatives were reminded that AMA policy provides that drugs, remedies or appliances may be dispensed or supplied by the physician, if doing so is in the best interest of the patient and does not exploit the patient. Further, it is AMA policy that rental of space for a pharmacy by a physician or group of physicians should be on a fixed-rental basis. It was also emphasized to pharmacy representatives that at the 1966 AMA Annual Meeting, a resolution with the following provisions was approved: (1) the contribution of pharmacy as an independent profession in assisting physicians toward the constant goal of improved patient care was recognized and commended; (2) the AMA urged physicians to encourage and support the continued growth of pharmacy as a valuable and necessary member of the health team; and (3) although there are circumstances in which physicians may ethically engage in the dispensing of drugs, the AMA nevertheless urged physicians to avoid the regular dispensing and retail sale of drugs to patients wherever the patients' drug needs can be met adequately by local ethical pharmacies.

There was general agreement at the first joint meeting that it behooves both medicine and pharmacy to negotiate their problems at the conference table, rather than to rely on restrictive governmental controls and regulations.

At their second joint meeting on February 12, members of the IMS and IPhA Committees met with representatives of the State Board of Pharmacy to review the Federal Drug Abuse Control Amendments of 1965, which went into effect on February 1, 1966, and the Iowa Drug Abuse Control Act, which became effective August 15, 1967, and to discuss enforcement policies and procedures that may be invoked against dispensing physicians.

As a result of the meeting, and in an effort to supplement information regarding federal drug-abuse control requirements published in past issues of the IMS JOURNAL, a special NEWS BULLETIN was mailed to all IMS members concerning the responsibilities of dispensing physicians under federal and state drug-abuse control laws. In addition, an "In the Public Interest" article on this subject was prepared for publication in the March, 1968, issue of the JOURNAL, and a special kit of informational materials is being developed and will be made available to physicians on request.

Last September the Iowa Interprofessional Association was reorganized, and became the Iowa Health Council. The IHC Articles of Incorporation and By-laws include provisions for extending invitations-to-membership to appropriate health groups, subject to the approval of all current member organizations—i.e., Iowa Medical Society, Iowa Dental Association, Iowa Veterinary Association, Iowa Pharmaceutical Association, Iowa Nurses Association, and Iowa Hospital Association. Society representatives on the IHC Board of Directors are Oscar Alden, M.D., S. P. Leinbach, M.D., and Mr. Donald L. Taylor, who also serves as the organization's secretary-treasurer.

In previous years, the Iowa Interprofessional Association sponsored a special "Hall of Health" exhibit section at the Iowa State Fair, and this project will be continued by the Iowa Health Council. Exhibits from each member organization, as well as from other health-oriented groups and commercial pharmaceutical companies will be on display.

OSCAR ALDEN, M.D., *Chairman*

COMMITTEE ON STATE DEPARTMENTS

It has been customary at the outset of this brief report to point out that the Committee on State Departments consists of the chairmen of six separate subcommittees. Each of those subcommittees maintains a liaison relationship with the appropriate agency or department of state government, and it is at the subcommittee level that the bulk of the work is done. The subcommittees, whose individual reports follow, include Maternal and Child Health, Public Assistance, Aging and Chronic Illness, Rehabilitation, Safe Transportation and Nervous and Mental Diseases.

The Society is pleased to have the opportunity to advise and work with the State Department of Health on a variety of programs and projects. As a regular feature in the JOURNAL, the Society publishes material which the Department of Health wishes to bring to the attention of the medical profession. The Society is also provided several copies of a monthly summary of Department of Health activities and they are made available to appropriate IMS members.

The Department of Health has devoted much time and energy this past year to the establishment of coun-

ty boards of health under the provisions of legislation passed by the last Iowa General Assembly. In this connection, at the present time, a series of seminars on public health problems are being conducted in 12 locations in the state, with emphasis on the responsibilities of the local boards of health.

As chairman of the Committee on State Departments and also as chairman of the Subcommittee on Safe Transportation, it was my privilege to represent the Society at a recent AMA Conference on The Community and Emergency Medical Services. The five-pronged conference considered first-aid and immediate emergency care; transportation of the ill and injured; emergency communications; emergency facilities, and finally, financing of those items. It becomes apparent, after a conference of that nature, that emergency medical services can best be planned on a local or regional basis within the state. This is an area to which health planning councils might give some attention.

A. H. DOWNING, M.D., *Chairman*

SUBCOMMITTEE ON AGING AND CHRONIC ILLNESS

The Subcommittee has held no formal meetings this year, but individual members have served the Society in several ways. The Chairman of the Subcommittee has continued to represent the IMS on a State Department of Health Advisory Committee which is developing an informational manual on physical therapy. Another member of the Subcommittee is serving on a multi-organization committee that is considering a statewide conference or seminar bearing the title, "The Continuum of Care." That conference would be intended as a means of promoting better total understanding of the various services included in the health-care spectrum, e.g., home health services, homemaker services, ambulatory hospital services, rehabilitation services, etc. The project is still in the exploratory stages, and no definite decision has been made as to whether or not it will actually take place.

Informational materials have been distributed this year to the members of the Subcommittee. They have included the first in a series of four publications to be released by the U. S. Department of Health, Education and Welfare under the general title "Working with Older People." This first volume is entitled "The Practitioner and The Elderly." Other materials circulated to the Subcommittee have included the CHRONIC ILLNESS NEWSLETTER of the AMA, and certain directives from the Social Security Administration pertaining to the responsibility entrusted to the Medicare fiscal intermediary in determining what constitutes custodial care and what constitutes extended care services in an extended care facility.

The First Governor's Conference on Aging, sponsored by the Commission on the Aging of the State of Iowa, was held in Des Moines October 3 and 4. The members of the Subcommittee were provided program materials for that two-day Conference in the hope they might be able to attend.

G. E. MONTGOMERY, M.D., *Chairman*

SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

The Subcommittee on Maternal and Child Health met on January 10, 1968, to give attention principally to two subjects; (1) the desirability of the Iowa Medical Society's supporting legislation to make compulsory the administration of certain immunizations, and (2) the position of the Iowa Medical Society with respect to possible liberalization of the state's abortion laws.

(1) *Immunization.* The Subcommittee members examined independently and jointly a summary of state immunization laws developed by the National Communicable Diseases Center. According to that summary 30 states have no element of compulsion in their laws with respect to immunization. Fourteen other states were said to have comprehensive laws requiring immunizations, and the laws of nine others have both compulsory and voluntary aspects.

The Subcommittee acknowledged that school boards and superintendents may require certain immunizations as prerequisites for entry into school. But it was recognized that there is no statutory support for a local school ruling of that kind.

The Subcommittee placed itself on record as being strongly in favor of the pre-school administration of the six accepted immunizations, as well as other immunizations which may be approved by the American Academy of Pediatrics. However, after an extended discussion of the philosophy of voluntarism versus the philosophy of compulsion, the Subcommittee recommended that the Society maintain its present position, which is not to encourage compulsory immunization legislation. It was agreed that the Society would be well advised to support public education programs at the local or community level as fully as possible.

The Subcommittee offered its own reaffirmation of the Department of Health policy statement having to do with the administration of immunizations. That statement was endorsed by the 1967 IMS House of Delegates. Pursuant to it, at least 43 counties have conducted county-wide measles immunization programs and approximately 65,000 immunizations have been administered.

(2) *Therapeutic Abortion.* The Subcommittee reviewed the statements which have been adopted by the House of Delegates on this subject in the recent past. The House has recommended the Society follow developments in this area, but has advocated nothing further.

The Subcommittee evaluated the extensive and comprehensive Report on Therapeutic Abortion prepared by the AMA Committee on Human Reproduction which was adopted in June, 1967, by the AMA House of Delegates. The principal thrust of this AMA Report is contained in the following statements:

"In view of the above, and recognizing that there are many physicians who on moral or religious grounds oppose therapeutic abortion except when:

"(1) There is documented medical evidence that continuance of the pregnancy may threaten the health or life of the mother, or

"(2) There is documented medical evidence that the infant may be born with incapacitating physical or mental deficiency, or

"(3) There is documented medical evidence that continuance of a pregnancy, resulting from legally established statutory or forcible rape or incest may constitute a threat to the mental or physical health of the patient;

(4) Two other physicians chosen because of their recognized professional competence have examined the patient and have concurred in writing; and

(5) The procedure is performed in a hospital accredited by the Joint Commission on Accreditation of Hospitals.

"It is to be considered consistent with the principles of ethics of the American Medical Association for

physicians to provide medical information to State Legislatures in their consideration of revision and/or the development of new legislation regarding therapeutic abortion."

With assistance from IMS legal counsel, the Subcommittee has evaluated the therapeutic abortion laws recently enacted in Colorado, North Carolina and California. All three states have amended outdated statutes. The reasons for an abortion cited in those statutes are basically identical, and they are generally the same as those set forth in the AMA Statement.

Members of the Subcommittee recognize that in all probability some legislation in this area will be introduced during the next Iowa General Assembly. This being the case, the Subcommittee is of the opinion that the Society should adopt some basic guidelines for use by its Committee on Legislation.

With the preceding in mind, the Subcommittee is unanimous in its support of a liberalization in the existing state abortion laws. The Subcommittee is of the opinion that the voluntary performance of an abortion is justified if done in accordance with accepted medical practice and if certified by a statutory hospital committee.

The Subcommittee recommends Society endorsement of the AMA-approved statement on therapeutic abortion. In addition the Subcommittee is in the process of drawing up a tentative set of supplementary guidelines for use in any consideration which may be given to legislation by the next Iowa General Assembly. This supplementary guideline material will be submitted to the House of Delegates in the form of a Supplemental Report, and it will be recommended that those guidelines be adopted.

The Subcommittee is pleased to observe the energetic work being done by the Society's new Committee on Sports Medicine, particularly in the area of wrestling and weight reduction.

The Subcommittee is maintaining its interest in the matter of sex education, and has encouraged one of its members, Dr. Madelene Donnelly, in her conduct of one-day sex-education workshops for school nurses and others.

The Subcommittee was represented last November at the AMA's 11th National Conference on Physicians and Schools.

The Subcommittee has recommended continued participation by the Society in the Iowa Youthpower Project. That program is supported by several private associations, and encourages educational projects among young people in the area of good nutrition and eating habits.

W. J. BALZER, M.D., *Chairman*

SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES

The Subcommittee has met frequently during the past year in an attempt to deal with a number of matters associated with psychiatric care. This report will deal briefly with the ones of those items which are believed to be most important.

The Subcommittee's principal assignment for the year was provided by the 1967 IMS House of Delegates. After modifying and reaffirming the IMS Standards for Mental Health Clinics, the House directed the Subcommittee to develop a patient-eligibility guide for use by the clinics. It was further requested that the Subcommittee disseminate that income and resources guide to the appropriate individuals.

The Subcommittee reviewed materials and deliberated over that assignment on two different occasions, and reached the conclusion that the best way to carry out the charge of the House of Delegates would be to re-word Purpose Number One of the IMS Standards to read: "To provide outpatient services for those who are unable to pay usual and customary fees. Eligibility should be determined on the basis of income and total financial resources and responsiblities."

The recommended revisions were reported to the IMS Executive Council on July 26 and were approved by that body. The Revised Standards have since been distributed with an appropriate covering letter to the presidents of county medical societies and to the medical directors and presidents of the boards of the mental health centers. The Standards have also been published in the JOURNAL OF THE IOWA MEDICAL SOCIETY. The distribution of this material has prompted some additional correspondence between the Subcommittee and clinic or community representatives who have sought further information. Attention is being given by the Subcommittee to the several centers that do not conform to the Standards of the Iowa Medical Society.

Noting that the 1967 House of Delegates had no objection to the Subcommittee's conferring with representatives of the Board of Control or the state mental health institutes, the Subcommittee met on September 20, 1967, with officials from the four state mental health institutes and the two state schools for the retarded. During that meeting, ways were explored in which care provided by institutions in the private and in the public sectors might be better coordinated. Consideration was also given to ways in which joint effort might be exerted to increase the availability of care to the citizens in various communities. It was the conclusion of the Subcommittee that the meeting served a worthwhile purpose in establishing communications with the representatives of the state institutions.

Certain problems involving insurance coverage have come to the attention of the Subcommittee, and counsel has been provided whenever possible. The Subcommittee has reviewed mental health legislation passed by the last Iowa General Assembly, especially that relating to commitment. It is continuing to study the future needs of the state with respect to legislation and governmental organization.

The Subcommittee recommended that the Society cooperate in an alcohol education program that is being coordinated by the Iowa Commission on Alcoholism. That program will seek to develop a list of physician consultants to work with local school personnel in this area.

The Subcommittee expects to be represented at the AMA's 14th Annual Conference of State Medical Society Mental Health Representatives in Chicago on March 15 and 16.

Members of the Subcommittee have been active in numerous mental health endeavors about the state this year. Members of the Subcommittee serve as president of the Iowa Association for Mental Health, as members of the Mental Hygiene Committee, and as members of other groups too numerous to mention.

The Subcommittee was saddened this year at the death of one of its long-time members, G. R. Rausch, M.D., of Sioux City.

W. A. BOCKOVEN, M.D., *Chairman*

SUBCOMMITTEE ON PUBLIC ASSISTANCE

The Subcommittee on Public Assistance has attempted to maintain surveillance, this past year, over the welfare medical programs that are operative in

Iowa. Principal among those, of course, is Title XIX or Medicaid.

The Subcommittee has been hampered somewhat in its efforts to function effectively as the Society's liaison body with the State Board of Social Welfare. The factors contributing to the difficulty have been (1) the uncertainty connected with the governmental reorganization plan authorized by the 1967 Iowa General Assembly which merged the Board of Social Welfare, the Department of Social Welfare, the Board of Control, the Board of Parole and other governmental agencies into a single State Department of Social Services; and (2) the absence and the subsequent resignation of Elmer M. Smith, M.D., as director of medical services for the State Department of Social Welfare.

The several attempts by the Subcommittee to arrange a meeting this year with the Board of Social Welfare have been unsuccessful. It has now been suggested that such a session will be more productive if it includes Mr. Maurice Harmon, the man recently appointed by the governor to serve as Iowa's first commissioner of social services. The Subcommittee will continue its efforts to arrange a meeting with appropriate representatives of the new Department of Social Services. If such a meeting occurs prior to the IMS annual meeting and produces information of importance to the House of Delegates, a supplemental report will be prepared.

Initially, the new State Department of Social Services will consist of five divisions: Child and Family Services; Mental Health; Corrections; Planning, Research and Statistics; and Administration. Each of those divisions will have a director appointed by the commissioner. There is no provision at this time for establishing a division of medical services. The Subcommittee has been told, however, that the commissioner is empowered to establish such a division, and careful consideration is being given by the IMS to the desirability of advocating such action.

The resignation of Dr. Smith as director of medical services in the Department of Social Welfare was officially noted by the Subcommittee at its January 25 meeting. The Subcommittee added its endorsement to a letter transmitted by the chairman to the IMS president requesting that Dr. Smith be commended for his outstanding service in that position. The Subcommittee feels strongly that Dr. Smith's successor should be an individual who can and will work with the medical profession, and it has recommended that the IMS seek to assist to the fullest extent possible in finding a physician to fill that post. At the suggestion of the Subcommittee, a letter has been distributed to the presidents of county medical societies requesting the names of physicians who might have some interest in the appointment.

Norman Custer, M.D., of Des Moines, is now serving as acting medical director for the Department of Social Welfare.

With respect to Title XIX, the Subcommittee has discussed and evaluated the several problem areas which have been brought to its attention. The chairman of the Subcommittee continues to serve as the Society's representative on the statutory Title XIX Advisory Council. That group, however, has met only once this year. Probably it would have met more times if it had not been for the organizational overhaul occurring in the Department of Social Welfare.

The Subcommittee met with representatives of the Welfare Committee of the Iowa Pharmaceutical Association on January 25. Three Title XIX rulings were discussed with the IPhA officials at that time: (1) the rule which prohibits reimbursement for non-legend drugs; (2) the rule which requires a physician's signature on every prescription; and (3) the rule which prohibits refilling a prescription.

Regarding the first item, the representatives of both organizations shared a feeling that payment under Title XIX should be allowed for all therapeutic supplies required as the result of a physician-made diagnosis. Those would not include routine medicine-cabinet supplies. The Subcommittee takes the position that Title XIX should provide reimbursement for legend drugs and for over-the-counter drugs that are not routinely sold to patients. The Subcommittee feels that the doctor should be allowed the prerogative of electing the soundest course of treatment for his patient, and that in charting that course of treatment he should understand and pay some heed to the economics involved.

The Subcommittee agrees in principle with the IPhA that the interests of everyone involved in handling prescriptions for Title XIX patients would be best served by the restoration of the signature-delegation authority that was acceptable under Old Age Assistance. It is acknowledged that under that arrangement any physician who wished to do so could easily refuse to authorize the use of his signature.

The third matter discussed with IPhA representatives concerned the Title XIX regulation that requires a new, signed prescription with each individual order for a medication. Again the Subcommittee concurred in principle with the IPhA in contending that when a physician writes a prescription he should be permitted to specify a number of refills, if they are likely to be required and if they are to be obtained within a specified period of time. The feeling was expressed that there might be a limitation of two refills for each prescription.

In reference to these rulings, the Subcommittee wishes to call attention to the wording of the Iowa law implementing Title XIX. It gives flexibility to the Department of Social Welfare in limiting the items which may be reimbursible. The allocation of funds by the Iowa Legislature places a limit on the amount of money expendable. In order to meet the usual, customary and reasonable charges of vendors, there has to be a limitation on services and materials so that the Department can remain within its budget.

An additional aspect is the anticipated imposition of a national formulary. It would influence the selection of drugs for the treatment of Title XIX patients. In view of these factors, the Subcommittee provides the foregoing as information, but does not suggest further action at this time.

The Subcommittee met with representatives of the Iowa Nursing Home Association on January 25 to discuss Medicaid and Medicare. The Title XIX requirement that a physician see his skilled-nursing-home patients once each month was considered. It is felt that this requirement is particularly burdensome, and that to satisfy it everything possible should be done to encourage the skilled-nursing-home personnel to bring ambulatory patients to the doctor's office at the required intervals.

The INHA officials presented the Subcommittee a somewhat bleak picture of the future availability of extended-care-facility and skilled-nursing-home care for Title XVIII and XIX patients in Iowa. They suggested that excessive certification requirements are limiting the numbers of facilities that desire to par-

ticipate. The requirements from a staffing standpoint, for example, are causing costs to spiral to the point where participation is said to be impossible. The Subcommittee has no recommendation to make on this subject. Several members felt that if standards were lowered there perhaps would be some reluctance on the part of proprietors to improve their facilities.

Other subjects discussed with the INHA representatives included custodial care determinations, medical records, utilization review, voluntary planning, upgrading of nursing home facilities, etc.

The chairman and another IMS member represented the IMS at a conference for extended care facility administrators which was held in Des Moines on December 8.

The Subcommittee intends to give further scrutiny to the 1967 Social Security Amendments—particularly to those which relate to Title XIX. Only sketchy information has been available to this point. The amendment about which most concern has been expressed is the one which requires a medical audit committee to conduct periodic evaluations of the appropriateness of care being provided to Title XIX patients. The Subcommittee recognizes the importance of the profession's doing as much as possible to retain control of this activity. It is for the purpose of discussing that amendment and other matters that the Subcommittee is attempting to arrange a meeting with appropriate representatives of the Department of Social Services in the near future.

In its meetings this year the Subcommittee has had an opportunity to review and respond to several questions posed by individual member physicians. Those questions have fallen generally into one of the areas already covered in this report. The Subcommittee shares the exasperation that has been expressed in some letters over the increasing administrative burdens imposed upon the physician. It is felt, however, that only through concerted efforts by organized medicine at the county, state and national levels can this trend be held in any kind of check.

The Subcommittee is deeply grateful to the IMS staff for its skillful guidance, untiring efforts and limitless assistance. The chairman wishes to commend the members of the Subcommittee for their conscientious efforts on behalf of the medical profession in the State of Iowa.

L. J. O'BRIEN, M.D., *Chairman*

SUBCOMMITTEE ON REHABILITATION

The Iowa Governor's Committee on Employment of the Handicapped was made statutory by action of the 61st Iowa General Assembly. The Committee consists of 28 members appointed by the Governor and 10 ex-officio members who are in charge of state agencies interested in employment for the handicapped.

Governor Hughes designated the State Department of Public Instruction as the official agency to carry out the comprehensive study of vocational rehabilitation needs in Iowa, and accordingly a grant of $100,000 was awarded to Iowa for the first year of the study. A meeting of the IMS Subcommittee on Rehabilitation was held January 12, 1967, with Mr. Hunt, the director of the State Division of Vocational Rehabilitation, for the purpose of learning the objectives of the planning project as set out by the Governor's Committee on Employment of the Handicapped.

The study is an effort to determine the numbers of each category of disabled persons who are within the state and in need of vocational rehabilitation; to evaluate the program goals in vocational rehabilitation and to identify any barriers to rehabilitation; and, last, to determine the ways in which governmental and voluntary programs can bo coordinated. A report of this study is not available.

Several seminars have been held throughout the year, sponsored by the Iowa Division of Rehabilitation, Education and Services, the Governor's Committee on the Employment of the Handicapped, and the Iowa Rehabilitation Association. These meetings have been conducted chiefly for non-medical people, and your chairman has attempted to attend these meetings simply for the purpose of surveillance.

From the professional point of view your Committee has little to report, since it has met only once and there is a great deal of inactivity, from the professional side, except in the existing medical centers. One professional conference has become a yearly occurrence —the one sponsored by the Younker Memorial Rehabilitation Center in Des Moines in association with the Iowa Orthopedic Society. It has been well attended, guest speakers on orthopedic and other handicapping conditions have been presented at its sessions, and it has gained a reputation that now extends beyond the state's borders.

Oakdale Sanatorium has been transferred to the University of Iowa, and plans are being made for the establishment of a comprehensive evaluation and a rehabilitation center there. The purpose of that center will be to coordinate the activities of University Hospitals and the Iowa Division of Vocational Rehabilitation in training people for rehabilitation work. At the present time the center is directed by Dr. Maurice Schnell, who is trained in orthopedic surgery as well as physiatry, and hopefully it will be available in the not too distant future for consultations on service problems related to rehabilitation.

CARROLL B. LARSON, M.D., *Chairman*

SUBCOMMITTEE ON SAFE TRANSPORTATION

The Committee on Safe Transportation continued to maintain liaison with the State Department of Public Safety and the Iowa Highway Safety Patrol during the past year.

Following authorization by the IMS in 1966, a Medical Advisory Board to the Department of Public Safety was established to assist in evaluating the medical reports required on certain drivers' license applicants. It should be emphasized that the granting or denying of drivers' licenses remains the responsibility of the Public Safety Department.

To date, the Advisory Board has reviewed 14 case files. There is general agreement by everyone involved that the Board is serving a valuable and useful function and should be maintained.

Your Committee chairman has been designated to represent the IMS on an accident-review board, along with the Commissioner of Public Health, the Commissioner of Public Safety, a representative of the Iowa Society of Osteopathic Physicians and Surgeons, and a representative of the Iowa Trauma Committee-American College of Surgeons. That Board's function is to review and study accident reports, particularly those resulting from traffic accidents.

The IMS has been a co-sponsor of three trauma seminars on the immediate care of the sick and injured. The first was held in Iowa City in November, 1966; the second was held in Burlington last April; and the third in Atlantic last November. Similar conferences are to be conducted in other sections of the

state. The other seminar sponsors are the State Department of Health, the University of Iowa College of Medicine, the Iowa Trauma Committee-American College of Surgeons, and appropriate county medical societies. The programs are designed for paramedical personnel, emergency unit personnel, law enforcement officers, fire fighters, and other interested persons. Plans are also being made to set up a course on the immediate care of the sick and injured in some area community colleges. They will involve longer periods of study.

Your Committee chairman conferred with the Commissioner of Public Safety regarding programs and problems of mutual interest and concern to the IMS and the Department of Public Safety, and regarding the National Uniform Standards for State Highway Safety Programs, developed under the National Highway Safety Act of 1966. In Iowa, the Department of Public Safety, the Department of Public Instruction, the State Highway Commission and the Department of Health will assume responsibility for developing and implementing various programs consistent with the requirements set forth in the Standards. Of particular interest to medicine is a section relating to emergency medical services. The Standards provide that each state, in cooperation with its local political subdivisions, shall have a program to assure that persons involved in highway accidents receive prompt emergency medical care under the range of emergency conditions encountered. As a minimum, the program must provide that:

I. There are training, licensing and related requirements (as appropriate) for ambulance, and rescue vehicle operators, attendants, drivers and dispatchers.
II. There are the proper types and numbers of emergency vehicles, and of supplies and equipment to be carried.
III. There are requirements for the operation and coordination of ambulances and other emergency care systems.
IV. There are first-aid training programs and refresher courses for emergency service personnel, and the general public is encouraged to take first-aid courses.
V. There are criteria for the use of two-way communications.
VI. There are procedures for summoning and dispatching aid.
VII. There is an up-to-date plan for emergency medical services, including facilities and equipment; definition of areas of responsibility, agreements for mutual support, and communications systems.

Economic assistance will be available from the federal government to aid well-planned programs. After developing a program, a state may request federal aid to the extent of 50 per cent of the required funds. States which fail to comply with the recommended standards will not be eligible. In extreme cases of non-compliance, a state would also be subject to the loss of 10 per cent of its federal highway funds.

In January, your Committee chairman represented the IMS at the Second National AMA Conference on The Community and Emergency Medical Services, which focused on first aid and emergency care, transportation of the ill and injured, communications and emergency facilities. Copies of his report on the conference were provided to members of the Safe Transportation Committee, and also to members of the Committees on Rural Health and National Emergency Medical Service, which are also concerned with emergency medical service programs.

It is apparent that each county medical society should evaluate current emergency medical service programs, and endeavor to promote coordinated planning, organization and operation of a total EMS system. The Committee on Safe Transportation will work with the Rural Health and National Emergency Medical Service Committees in transmitting pertinent information on this subject to county society officials.

As a public service, the IMS continues to secure films on automotive safety for use by schools throughout the state.

A. H. DOWNING, M.D., *Chairman*

Reports of Special Committees

COMMITTEE ON BLOOD BANKING

The Committee on Blood Banking has not met during the past year. However, correspondence among members of the Committee during the year has dealt with problems in three major areas which may be of concern to the Medical Society.

1. The American Medical Association is encouraging state medical societies to support the enactment of state legislation which would define the provision of blood for transfusion to the patient as a "service" and not a "sale." The AMA's policy statement on blood banks says in part that procurement of human blood and its transfusion to patients constitute medical procedures. Until recently trial courts have generally held that the provision of blood for transfusion is a service and not a sale, and that warranties appropriate to sales transactions do not arise. However in a relatively recent case in Florida, the Supreme Court rejected this view, even though there is as yet no known test to detect the virus of serum hepatitis. There is a concurring opinion which goes so far as to state that the theory of "strict liability" should be applicable. It is imperative that the Iowa Medical Society take action to protect the blood banks in our state from such unfair legal actions.

2. Blood procurement is becoming a serious problem in Iowa and throughout the nation. There is a need for vigorous physician support. The use of blood for major surgical procedures has continued to skyrocket, yet blood replacements have gradually declined in many communities to a level of 15 to 25 per cent. Blood banks must have the active support of the physicians who are utilizing the blood and who can utilize close patient-physician relationships in promoting blood replacement.

3. Community blood banks wishing to bill separately for blood are finding that Blue Cross, both in its capacity as intermediary for Medicare and in its direct capacity as insurance payor for the Blue Cross program, forces them to bill through the hospitals. The Medicare law has set the precedent for this practice, but the requirement that other blood be charged through the hospitals is apparently promoted by the various state Blue Cross offices.

The Blood Bank Committee feels that the implied warranty problem and the urgent need for physician support in blood replacements are matters of prime importance that deserve the attention of all Iowa Medical Society members.

W. S. PHETEPLACE, M.D., *Chairman*

COMMITTEE ON COSTS OF MEDICAL CARE

In its 1967 Report to the House of Delegates, the Relative Value Index Committee urged the Society to designate an existing committee or to appoint a new committee (1) to remain alert to changing medical cost patterns in particular regions of the state, (2) to analyze those trends, and (3) to make such recommendations as it deemed appropriate. In adopting that report of the Relative Value Index Committee, the 1967 House of Delegates agreed that the Society would be well advised to evaluate trends in medical costs within the state continually.

The Committee on Costs of Medical Care was appointed this year and is an outgrowth of those recommendations. Its membership includes several of those who have served on the Relative Value Index Committee.

The Committee has functioned primarily as a counselor to Blue Shield in its role as carrier for Title XVIII of Public Law 89-97. The Social Security Administration issued an ultimatum to Blue Shield last fall to the effect that it must revise its claims processing procedures to speed up payments to Medicare recipients and others. This SSA edict required Blue Shield to establish payment levels based on criteria set forth in the Medicare law and to make payments pursuant to these levels. It was an obvious departure from the original procedure, whereby no physician's charge was to be reduced until a recommendation could be obtained from a county claims review committee.

It has been emphasized in the explanatory material sent to IMS members regarding this revision that an opportunity still exists for a claim to be reviewed, but this review now, of necessity, must occur after the initial payment of the claim.

The Social Security Administration is requiring Blue Shield (1) to examine existing information on the physician's usual charge for the procedure in question, and (2) to compare this with the determined prevailing charge in the locality. If a claim exceeds the ceilings established by those criteria, it is then subjected to further review to determine the extent of unusual circumstances. If after that evaluation the charge still surpasses the "reasonable" limit, the maximum allowable amount is paid immediately to the patient in the case of direct billing, or to the physician if an assignment has been executed. As mentioned, the opportunity for the patient or the physician to have a claim examined by a county society review committee still exists, but in contrast to past procedures, the review, if requested, must take place following initial payment.

The Committee was invited by Blue Shield to suggest the best means of determining prevailing charges so that claims can be paid at, but not in excess of, that maximum level. The Committee has met with Blue Shield representatives to review the matter and to offer reactions. Out of that meeting and subsequent deliberations has evolved a four-fold evaluation mechanism which a majority of the Committee believe to be a fair way of determining prevailing charge levels. The different applications which are now being used by the carrier in processing Medicare claims take into account both geographical and specialty considerations. It is important to understand that these four separate analyses are being utilized to justify payment of an individual doctor's usual and customary charge whenever possible, rather than to reduce a specific charge. The carrier has indicated that it intends to update its prevailing figures on a quarterly basis in order to maintain an accurate and current reflection of economic conditions.

The Committee recognizes that the handling of matters such as this requires careful and extensive review, and it was pleased that the carrier found an opportunity to seek the counsel of the Iowa Medical Society.

In conclusion it might be well to emphasize again the Society's strong belief in the usual and customary fee philosophy and to urge physicians (1) to indicate on any and every claim form their usual and customary fee and not enter the amount which is presumed to be allowable under a particular program, and (2) to use the direct billing mechanism whenever possible so as to preserve the patient-doctor relationship and to achieve the benefits that result when a patient assumes responsibility for dealing with the third party.

C. O. ADAMS, M.D., *Chairman*

COMMITTEE ON EXFOLIATIVE CYTOLOGY

This Committee has been active by correspondence and through active committee meetings. The members have worked with the Iowa Division of the American Cancer Society in its educational campaign directed toward both the public and physicians.

A series of editorials have been prepared and published in the JOURNAL OF THE IOWA MEDICAL SOCIETY urging wider use of the cervical smear as a means of early diagnosis of cancer of the cervix.

On recommendation of the Committee, the IMS Executive Council directed that it be reemphasized to all physicians that if for any reason a patient has not had a cervical smear recently in a practitioner's office (where the procedure should properly be done), medical staffs should be urged to include it in the routine hospital admitting procedure for any female patient over the age of 20. We are aware that this requirement has become law in the State of New York, and that some medical societies have adopted the practice as their policy. This action was reported to all IMS members in a NEWS BULLETIN.

We should like to reemphasize our conclusion that the use of the routine cervical smear as a screening procedure has accomplished a fantastic improvement in early diagnosis, treatment and survival. The American Academy of General Practice is also concerned in this area, and your Committee is working with it toward the adoption of a standard report form.

Your Committee has also considered the request of Joseph Buckwalter, M.D., director of the Iowa Central Tumor Registry, that the IMS sponsor a statistical survey to be conducted on a statewide basis, financed in part by federal funds. It would be combined with a survey and study of the socioeconomic impact of cancer. In 1965 the IMS approved the original centralization of the tumor registries at the University of Iowa. The Central Tumor Registry now performs statistical functions for tumor clinics in various hospitals throughout the state. It has been expanded considerably since its inception, and the present plan is to make it statewide and to use its data for a statewide statistical study. At the moment, as this report is written for the HANDBOOK, a final conclusion has not been reached.

K. R. CROSS, M.D., *Chairman*

COMMITTEE ON EYE CARE

The IMS Committee on Eye Care will present a supplemental report when the House of Delegates con-

venes in April. It has some work in progress, but no results to present at this time.

ARTHUR H. DOWNING, M.D., *Chairman*

COMMITTEE ON GROUP INSURANCE

The provisions of the liberalized Keogh Law have been discussed this past year in several issues of the JOURNAL OF THE IOWA MEDICAL SOCIETY. The subject was also reviewed in some detail before the 1967 House of Delegates. Our purpose in calling attention to it again is merely to remind the delegates that this liberalization became effective on January 1, 1968. Under the new Keogh provisions, physicians and other self-employed individuals will receive more equitable income-tax treatment than they have been accorded previously on money they invest in approved retirement plans.

The new Keogh provisions are such that when the physician in private practice files his federal income tax return for the calendar year 1968, he will be entitled to claim tax exemption for the whole of his annual contribution to his own retirement plan up to a limit of 10 per cent of his income or $2,500, whichever is smaller, rather than on just half of that amount as was the case before passage of the most recent legislation.

There are many attractive Keogh-approved plans available to physicians, including the program of the American Medical Association. It has been the Society's feeling that each physician should inform himself about the various opportunities available, and then select the one best suited to his circumstances.

It is customary in this report to comment on the several Society group insurance programs which are available to interested member physicians. These programs continued to show a favorable experience this past year.

At its meeting on February 21, the Society's Board of Trustees authorized a modification in the Blue Cross-Blue Shield Statewide Physicians' Group Program. The change will improve the Blue Cross 365-Day Comprehensive Program by paying the full semi-private charge in participating hospitals. Heretofore, the program provided a room allowance of up to $25 per day. Under the modification, the participant desiring a private room will be allowed an amount equivalent to the most frequent charge for a semi-private room in the particular hospital. It is hoped that this new feature can be made effective by April 1. A letter will be sent by Blue Cross-Blue Shield to participants in the program to inform them of the improvement. This modification will require restoring premium rates to the 1967 level. There was a small premium reduction made in January, 1968.

The recent open-enrollment period attracted 35 additional members into the program, and the total participation continues to exceed the 1,000 level. The experience record for the 12-month period up to July 1, 1967, showed 313 Blue Cross and 640 Blue Shield claims. The amount of the claims was $63,228 for Blue Cross and $25,964 for Blue Shield. The number of days of hospitalization under Blue Cross was 2,164.

The Statewide Group Program provides flexibility to the extent of offering six different options. It deserves the consideration of all Iowa physicians.

The Life Insurance and Accident and Sickness Disability Income Programs continue to provide valuable protection and assistance to all insured members. In 1967 the Life Insurance Plan was increased to provide $50,000 of term insurance. Prior to 1967 only $20,000 was available to IMS members through this particular program. The Prouty Company, adminstrator of these IMS group programs, reports that the increased life insurance has been well accepted by the membership.

For the fifth consecutive year, under the Disability Income Program, 110 per cent of the guaranteed weekly benefit has been paid during an insured's disability. The extra amount has been provided by the Company to participating members at the regular premium cost.

The Prouty Company has also provided a Term Life Insurance Plan for members of the Woman's Auxiliary to the Iowa Medical Society in 1967. It is available in units of $5,000 from the Bankers Life Company, of Des Moines.

The Prouty Company reports that 1967 was a good year insofar as retaining and adding members to the programs was concerned. All Society members are encouraged to consider including these several plans in their primary insurance programs. Any physician who wishes information about the IMS group-life or group-disability coverages may write The Prouty Company, 2124 Grand Avenue, Des Moines, Iowa 50312.

COMMITTEE ON INDEPENDENT LABORATORIES

The Committee on Independent Laboratories has been extremely active in this its first year of existence. Considerable time and effort has been expended in attempting, on behalf of the medical profession and the citizens of Iowa, to obtain the best possible proficiency-testing mechanism for the independent medical laboratories which are certified to provide services under Medicare. The Committee has met independently on several occasions. In addition, representatives of the Committee, legal counsel and IMS staff have met with the commissioner of public health and with the director of the State Hygienic Laboratory. The Committee has also had representation at several meetings of the State Board of Health this past year.

As mentioned, the efforts of the Committee have been directed toward establishing a sound proficiency-testing program in Iowa, which would meet the requirements set forth in the Medicare Conditions for Coverage of Services of Independent Laboratories. These complex Conditions contain a provision which declares that if there is a "state operated" proficiency-testing program, all independent laboratories must be participants in it. An alternate provision allows for the existence of a "state approved" program in which participation by physician-directed laboratories would be voluntary.

Early in 1967 the relatively new Proficiency Testing Program of the State Hygienic Laboratory was recognized by the State Department of Health as "state operated" for purposes of Medicare. This action thus made it mandatory for independent laboratories to participate in the SHL program. The Committee on Independent Laboratories questioned the wisdom of this requirement for a variety of reasons. The Committee contends that the interests of the state's independent laboratories and those for whom they provide services would be better served if the labs were left free to participate in a voluntary state-approved program such as the one provided by the College of American Pathologists.

After extensive correspondence and numerous informal conferences regarding the feasibility and legality of modifying the initial recognition of the State

Hygienic Laboratory by the Department of Health, the matter was resolved when the director of the SHL informed the commissioner of health that the SHL did not wish its Proficiency Testing Program to be used for purposes of enabling independent laboratories to qualify for the Medicare program. The commissioner reported this development to the Board of Health in September, and indicated that his Department would rescind its recognition of the SHL Proficiency Testing Program for Medicare.

As a result of this action, no compulsory participation in a proficiency-testing program is required of independent laboratories in Iowa. When it rescinded its recognition of the SHL program, the Department of Health "approved" the proficiency-testing program of the College of American Pathologists, and, by so doing made that program applicable to Medicare in Iowa. It is now available to the independent laboratories on a voluntary basis. Most, if not all, of the independent laboratories in the state are already participants in the well-established and highly-regarded CAP program.

After giving its approval to the CAP program, the Department of Health also "approved" a proficiency-testing program provided by the American Association of Bioanalysts. The wisdom of that action has been questioned by the Committee, and the Board of Health and the commissioner have been so informed.

In its discussions with the representatives of the Health Department, the Committee has recommended the appointment of a state laboratory advisory committee. It is felt such a group would be invaluable to the Department of Health in its consideration of the complex matter of laboratory evaluation. It has been recommended that the new committee consist of from nine to 12 members. The reaction to this suggestion has been generally favorable, and it is hoped that appointment of such a committee may occur this year.

Through the efforts of the Committee, attention also has been given, this year, to the new three per cent sales tax on services as it applies to "test laboratories." The interpretation which has been provided is that this section of the new service tax law excludes medical laboratories operated by physicians.

C. W. SEIBERT, M.D., *Chairman*

PUBLICATIONS COMMITTEE

The JOURNAL is shown as an "expense" item in the amount of about $11,000 by the Treasurer's Report in this HANDBOOK, in contrast with approximately $18,000 last year and $20,000 the year before. Thus the cost of the magazine, per IMS member, was less than the $5 per year that is charged of cash subscribers.

The editors disclaim any credit for the improved financial picture. Rather, they attribute it to the resourceful and hard-working staff of the State Medical Journal Advertising Bureau, in Chicago, who sell space in 34 or 35 state medical society magazines.

The editors want to urge the members of the Society to submit reports of their interesting cases and reviews of their experience in treating particular conditions, for publication in the JOURNAL. Also, chairmen of county medical society program committees are urged to seek manuscripts from their guest speakers for publication in the JOURNAL. Every physician should think it one of his professional responsibilities to make an occasional contribution to the advancement of medical knowledge.

DENNIS H. KELLY, SR., M.D., *Editor*

COMMITTEE ON INDUSTRIAL HEALTH

The IMS Committee on Industrial Health met on one occasion this past year. In addition, the chairman was privileged to represent the Society at the September national meeting of state chairmen of industrial health committees, held in Atlanta, Georgia, in conjunction with the AMA's 27th Annual Congress on Occupational Health.

The Iowa Medical Society booklet entitled "Standard Procedures for the Industrial Nurse," prepared by the Committee approximately 10 years ago, was re-evaluated this year. Occasional requests for this booklet are still received. It was the eonsensus of the Committee that it would be wise to use the several AMA publications of this sort, rather than to up-date and re-issue the Society's booklet. It was agreed that when those AMA materials are provided in response to requests, it would be appropriate from a public relations standpoint to identify them as having come from the IMS Committee on Industrial Health.

The Committee has decided that there would be value in its developing and maintaining a roster of Iowa physicians who devote a considerable portion of their time to the practice of industrial medicine. Because Iowa is steadily increasing its industrial productivity, the preparation and maintenance of such a roster for reference use is felt to have merit. Such a roster might be valuable for physician placement purposes and as a ready source of names when information is desired on an industrial subject.

The Committee will ask county society presidents, in the near future, for the names of physicians who are involved in industrial medicine. The inquiry to county presidents will include two basic questions: Who are the physicians in your county engaged in the full-time practice of industrial medicine? Who are the physicians in your county engaged in a part-time practice of industrial medicine? It was agreed that a plant with 50 or more employees should be regarded as being of the minimum size for listing a physician working in a part-time industrial capacity.

The Committee gave its endorsement and support to the AMA's new Registry on Adverse Reactions Due to Occupational Exposures. The program, initiated last April, encourages physicians whose specialty is occupational medicine to complete and forward to the AMA a brief report form whenever they have observed an adverse reaction from occupational exposure to chemical, physical or biological agents.

Mr. Harry W. Dahl, Jr., the state industrial commissioner, was a guest of the Committee during a portion of its meeting. The Committee complimented Mr. Dahl for his effective work as editor of the NEWSLETTER OF THE INTERNATIONAL ASSOCIATION OF INDUSTRIAL ACCIDENT BOARDS AND COMMISSIONS.

Mr. Dahl reported that the 1967 General Assembly of Iowa made only one minor change in the Workmen's Compensation Program, that being the inclusion of coverage for executives. He cited as an occasional problem for him the reluctance of a few physicians to provide reports to both the employer and employee. The employer, according to Mr. Dahl, must have a physician's report and a statement in order to receive reimbursement. Physicians customarily provide this information to the employer but, Mr. Dahl said, on occasion they are hesitant about providing similar data to the employee. The Industrial Commissioner's Department, Mr. Dahl indicated, has adopted a rule which declares that the doctor has an obligation to re-

port to the patient as well as to the company. He added that the doctor may charge for these reports, and he may modify the patient's report if such a change seems appropriate.

Mr. Dahl reported that in most instances charges made by physicians have been reasonable. He mentioned that his department uses the Relative Value Index occasionally for reference purposes, but that no fee schedule has ever been adopted.

The Committee offered its assistance to Mr. Dahl in his announced plan to develop an Iowa Model Act for Workmen's Compensation.

The Committee is pleased to report that one of its members, D. W. Coughlan, M.D., is providing a valuable advisory service in behalf of the profession in his capacity as Medical Consultant to the Workmen's Compensation Program.

C. H. JOHNSTON, M.D., *Chairman*

IOWA BAR LIAISON COMMITTEE

No matters have been directed to this Committee during the year; hence no meetings have been scheduled.

The Society has not been successful in stimulating the Iowa Bar Association to take any part in the establishment of an Iowa Association of the Professions. The development of an Iowa Association of the Professions is still in the exploratory stages, and efforts to gain the support of the Bar Association will be continued.

R. P. LAGONI, M.D., *Chairman*

COMMITTEE ON IOWA REGIONAL MEDICAL PROGRAM AND COMPREHENSIVE HEALTH PLANNING

The Committee on Iowa Regional Medical Program and Comprehensive Health Planning includes in its membership the Society's official representatives to the Iowa Regional Advisory Group to IRMP (S. P. Leinbach, M.D., delegate, and F. G. Ober, M.D., alternate) and the president of the Health Planning Council of Iowa (H. L. Skinner, M.D.).

W. A. Krehl, M.D., coordinator for the Iowa Regional Medical Program, met with the Committee on two occasions during the past year, and emphasized that the goal of IRMP is to "increase the capability and availability of quality care in heart disease, cancer, stroke and related diseases" with emphasis on the education and training of health care professionals and further, that IRMP is determined not to encroach on the traditional system of health care, and is well aware that the regional medical program is to be developed "without interference with the patterns, or the method of financing, of patient care or professional practice."

With the authorization of the IMS Executive Council, and consistent with recommendations of this Committee, a statement of collaboration was submitted by the IMS to IRMP relating to the implementation of a comprehensive stroke-management program in Iowa. It is understood that the program will not be expanded beyond the educational concept into actual patient care. In essence, the statement of collaboration emphasizes (1) local considerations and local control; (2) contacts with county medical societies prior to implementation of a stroke management program in any given area; (3) non-interference with the doctor-patient relationships and the care provided by an individual doctor to an individual patient; and (4) close coordination with and involvement by voluntary regional or local health planning councils, and continued stimulation by the Health Planning Council of Iowa in forming such groups.

In addition, on the recommendation of the Committee, the IMS Executive Council directed that the following statements be referred to the Iowa Regional Advisory Group as a means of underscoring the Society's position relative to IRMP programs: (1) that the comprehensive stroke management program shall be implemented initially as demonstration projects in designated areas only, so that any problems can be resolved prior to any possible expansion of the program on a statewide basis; (2) that local county medical society approval shall be obtained prior to the initiation of any IRMP program in the state; and (3) that IRMP programs shall be developed in such a manner as to avoid any infringement on the private practice of medicine and traditional doctor-patient relationships.

The Committee was informed that heretofore the Economics Section of IRMP, which developed an "Iowa Physicians Survey" (subsequently abandoned by IRMP) has operated as an autonomous unit. However, it is known that this situation was recently rectified, and the responsibility of the Economics Section to the IRMP coordinator has been clearly defined. The Committee has also been told that the budget of the Economics Section has been reduced by 33 per cent; that many of its activities and projects will be curtailed; and that it will probably be phased out of IRMP by December 1, 1968.

The Committee has also devoted attention to comprehensive health-planning legislation and voluntary health-planning activities. Federal legislation (P.L. 89-749) requires each state to develop a comprehensive health plan under the administration of a single state agency, and the State Department of Health has been designated as that agency in Iowa. An advisory council to the state agency is to be formed, consisting of state and local government officials and representatives of private organizations. Fifty-one per cent of its members must be consumers. It is anticipated that several members of the Board of Directors of the Health Planning Council of Iowa, including Dr. Skinner, will be invited to serve on the Advisory Council, as individuals.

The voluntary Health Planning Council of Iowa, an organization spearheaded and supported by the IMS, is continuing its efforts to stimulate and assist in the formation of voluntary planning groups at the local level. Both IRMP and the State Department of Health have indicated a strong desire to cooperate with HPCI, as well as with local or regional voluntary health planning councils.

On March 29, 1967, HPCI sponsored a conference at the IMS headquarters building for county medical society representatives and other community leaders interested in voluntary areawide health-planning activities, in an effort to stimulate the creation of voluntary planning councils throughout the state. On December 13, 1967, another HPCI-sponsored conference was held for county medical society and other key community leaders, at the Society's building, to review provisions of comprehensive health-planning legislation, and the implementation of the law in Iowa.

The IMS Executive Council has approved the following recommendations of the Committee:

1. That every effort should be made to maintain and enhance the influence and effectiveness of HPCI, and that HPCI should continue its efforts to stimulate and assist in the formation of local or regional voluntary planning groups.

2. That it is incumbent upon individual physicians in general, and on the IMS in particular, to keep informed on the proposed projects and goals of the regional medical and comprehensive health-planning programs.

3. That since these programs have desirable features and objectives, the IMS must cooperate, through representation on appropriate advisory councils and committees, in the planning phases, so that when appropriate, expert medical guidance and leadership can be exerted to discourage the implementation of ill-conceived programs that are neither practical nor feasible, and which would be incompatible with the traditional patterns of patient care and professional practice.

S. P. LEINBACH, M.D., *Chairman*
F. G. OBER, M.D., *Co-Chairman*

MEDICAL ASSISTANTS' ADVISORY COMMITTEE

A special exhibit on activities of the Iowa Medical Society was displayed at the 1967 Annual Meeting of the Iowa Association of Medical Assistants, which was held in Iowa City last May. Plans are being made to develop another IMS exhibit for display at the 1968 IAMA Annual Meeting.

For the past three years, physicians who have attended the first session of IMS House of Delegates meetings have been guests of the IAMA at a special coffee-bar sponsored by that organization. The Medical Assistants group has announced plans to sponsor a coffee-bar again in 1968.

As has been past custom, an IMS staff member has been assigned to work with the IAMA on pertinent projects and administrative matters.

The Committee commends the IAMA for its many worthwhile activities.

JOHN H. SUNDERBRUCH, M.D., *Chairman*

COMMITTEE ON MEDICINE AND RELIGION

The IMS Committee on Medicine and Religion is pleased to note that many county medical societies have established committees on medicine and religion, and are conducting physician/clergy meetings at the local level to discuss subjects and problems of mutual interest and concern.

Considerable use has been made by physicians throughout the state of the AMA film titled "The One Who Heals." It depicts the kinds of situations in which the physician and the clergy are both involved in the care of patients. It can be obtained from the IMS headquarters office. A new AMA film on medicine and religion is to be released soon, and when specific information becomes available, an announcement will be made in the IMS REPORT, which is distributed to state and county medical society officers.

The IMS, through its Committee on Medicine and Religion, again cooperated with the Iowa Division of the American Cancer Society in sponsoring a series of physician/clergy conferences. They were held in Waterloo, LeMars, Mason City, Osceola, and Ottumwa.

Your Committee chairman will attend an AMA Regional Workshop on Medicine and Religion in Chicago on March 1. The purpose of that meeting will be to discuss the development of workshops for chairmen of medicine and religion committees at the county level; the planning and utilization of a speakers bureau; the availability of resource materials; and the expanding of activities in medical schools and theological seminaries.

The Committee urges all IMS members to attend and participate in the discussion concerning therapeutic abortion scheduled for Monday, April 29, during the IMS Annual Meeting. The Rev. Dr. Paul B. McCleave, director of the AMA Department of Medicine and Religion, will moderate that program.

R. P. FERGUSON, M.D., *Chairman*

COMMITTEE ON NATIONAL EMERGENCY MEDICAL SERVICE

A member of the Committee on National Emergency Medical Service represented the Iowa Medical Society at the first AMA Conference on Emergency Medical Services which was held in April, 1967. The conference program concerned all aspects of EMS, which encompass medical emergencies of any magnitude—from the single traffic casualty or cardiac patient, to the mass casualty incident. A second AMA conference on this subject was held in January, 1968, and the IMS was represented by the chairman of the Committee on Safe Transportation.

Three committees of the Society have overlapping interests and responsibilities in relation to emergency medical services programs—i.e., the Committee on National Emergency Medical Service, which has been involved primarily in civil defense and disaster medical care programs; the Committee on Safe Transportation, which has devoted attention to the National Uniform Standards for State Highway Safety Programs, with particular emphasis on a section relating to emergency medical services; and the Rural Health Committee.

The chairmen of these committees will maintain liaison and will coordinate activities with respect to emergency medical services programs, and will attempt to provide county medical societies with pertinent information on them.

It should be pointed out that the development of an efficient and effective emergency medical services program must be initiated at the local level, so that local needs and problems may be taken into consideration. In this connection, the AMA and the IMS urge physicians and other appropriate individuals to begin immediately to urge the development of adequate emergency medical services system at the community level, ones which will provide the most up-to-date methods of first-aid and emergency care, the best staffed and equipped transporting vehicles available, timely emergency communications in discovery and treatment of the ill and injured, and the highest quality medical care by personnel and equipment in the emergency facilities.

The IMS film entitled "Disaster Planning" continues to be utilized by in-state and out-of-state organizations that are involved in developing disaster medical care programs.

ROBERT C. LARIMER, M.D., *Chairman*

OSTEOPATHIC AND MD/DO LIAISON COMMITTEES

Nationally, the principal development in relations between osteopathy and medicine during the past year was the adoption by the AMA House of Delegates, in June, of Report E of the AMA Board of Trustees. It asserted that the primary remaining disparity between osteopathy and medicine is no longer one of cult vs. scientific discipline. Rather, it said, it is an inferior level of medical education and practice vs. a superior level of those same things. The report then proposed that the AMA Board of Trustees initiate negotiations aimed at converting schools of osteopathy into medical schools, and that the AMA Council on Medical Education arrange for the transfer of any osteopathy students who might wish to move to medical schools. By approving the report, the AMA House of Delegates ordered those proposals implemented.

Since the 1967 annual meeting, the IMS Committee on Osteopathy and the MD/DO Liaison Committee have held just one meeting each, in the morning and in the afternoon, respectively, of June 29, 1967. The AMA actions were the principal subjects for discussion. Members of the IMS Osteopathic Committee, at their session, expressed no strong feelings either in support of or in opposition to the AMA's plans, but expressed some doubt about their practicality. How, they asked one another, can a school administration and many if not most of its faculty members be eased out or otherwise superseded? And how, they asked, can admissions officers at a medical school decide upon the level of advanced standing to be accorded particular students wishing to transfer there from non-accredited institutions?

During the afternoon session the osteopath members of the MD/DO Liaison Committee were by no means enthusiastic about the AMA's plans. They acknowledged that the operation of their schools had become far too expensive for any instrumentality other than the state and/or federal government, but they were not happy about the means by which the AMA proposed to have medicine absorb osteopathy. Particular concern was expressed about the AMA's failure to propose any change in status for the men who already hold D.O. degrees, and about the probable abandonment of osteopathic manipulation, which some of the osteopaths maintained is not identical with physiatry or physical therapy.

At previous meetings there had been considerable discussion as to whether county medical societies can or ought to evaluate applicants for the IMS/ISOPS Evaluation and Enrollment Program until the applicants have practiced in the county for an appreciable length of time. The arguments for postponement were cogent ones, but those who wished osteopaths enrolled promptly after licensure contended that the recent graduates are the ones who should be permitted and indeed encouraged to attend postgraduate short courses at M.D. institutions.

During the meeting on June 29, the M.D. members of the MD/DO Liaison Committee reported that few enrolled osteopaths had been availing themselves of their opportunities to attend conferences and short courses at the U. of I. College of Medicine. For example, just 13 of them had enrolled for the GP Refresher Course at Iowa City in February, 1966, and only 11 of them had attended the same course in February, 1967.

At the June 29, 1967, meetings the IMS Osteopathic Committee and the MD/DO Liaison Committee approved the following sentence for inclusion in the letter of instructions that is sent to county medical society officers with applications from osteopaths: "Under the authorized procedure, it will be necessary for you to request an extension of time if the applicant has practiced in your county for less than one year and if more time is required for evaluation, or if action cannot be completed within 90 days."

Since the 1967 IMS annual meeting the Judicial Council has approved six additional osteopaths for the MD/DO Evaluation and Enrollment Program. Following is its current status:

Approved by the IMS Judicial Council	159
Approved by the county medical society but not by the IMS Judicial Council	1
Disapproved by the IMS Judicial Council	14
Hearings held by MD/DO Liaison Committee on appeal from disapproval by IMS Judicial Council	7
Hearings pending	0
No reply from county or pending	19

J. M. RHODES, M.D., *Chairman*

PRECEPTORSHIP COMMITTEE

A meeting of the IMS Preceptorship Committee was convened on May 18, 1967, by the chairman at the suggestion of Dean Robert C. Hardin of the U. of I. College of Medicine because (1) there had been some difficulty in arranging preceptorships for a few medical students, notably the young women; (2) Broadlawns-Polk County Hospital had secured few interns for the year commencing July 1, 1967 (it subsequently developed that it got none at all), and (3) it seemed to the dean that a succession of preceptees might be sent there to take the places, to some extent, of the missing interns. As it happened, a problem concerning the budget for the coming biennium prevented the dean from attending the meeting and his associate dean, Dr. Stone, presented his views.

Dr. Ed Posner, who is in charge of the teaching program at Broadlawns, reported that vacationing medical students in a number of instances have taken clerkships at Broadlawns and have been sufficiently impressed with the learning opportunities there so that they have returned later as interns.

It was pointed out that the possibilities for getting preceptors hadn't been exhausted. One of the ideas proposed was that the Iowa Chapter of the American Academy of General Practice, and in particular its executive secretary, might be called upon for help in recruiting preceptors. Another suggestion was that Dr. C. E. Radcliffe might resume the task of finding preceptors for hard-to-place students, and that he might call upon the other members of the Preceptorship Committee for help whenever necessary.

Attention was called to a plan under which the fourth year of medical school is shortly to become a period during which each student may undertake a learning project of his own choosing. (See remarks by Dean Hardin, *et al.* in J. IOWA M. SOC., 57:122-125, Feb., 1967.) One of the alternatives, it was announced, is to be a year-long study of family practice in a Department of Family Practice which is yet to be established, but since by no means all senior medics can be expected to choose that alternative and since it is agreed that all students should have a taste of general practice, preceptorships will continue to be a prerequisite

for graduation and will be scheduled for the second half of the sophomore year or the first half of the junior year. Doubt was expressed that second-semester sophomores or first-semester juniors would be more help than hindrance in patient care at Broadlawns.

Concern was expressed over the possibility that any sort of experience initially intended as a means of introducing medical students to general practice in a hospital setting might quickly degenerate into some sort of clerkship, and that hospitals throughout the state might seek preceptees as a form of cheap labor. In any case, it was contended rather vehemently that any change in the preceptorship program would be interpreted by private practitioners throughout the state as an attempt to close the door through which they have had opportunities to share in the instruction of medical students.

At the end of the discussion, the Preceptorship Committee went into executive session and agreed unanimously on the following recommendation to the IMS Executive Council: "The preceptorship program should be carried out as in the past, except that in unusual situations preceptees may be placed in a hospital environment that can provide a general-practice experience.

L. D. CARAWAY, M.D., *Chairman*

COMMITTEE ON QUACKERY

On July 26, 1967, the Executive Council of the Iowa Medical Society approved a "Policy Statement on Chiropractic," which had been previously adopted by the American Medical Association in November, 1966. A report concerning this action was announced in the press. The text of the statement follows:

"It is the position of the medical profession that chiropractic is an unscientific cult whose practitioners lack the necessary training and background to diagnose and treat human disease. Chiropractic constitutes a hazard to rational health care in the United States because of the substandard and unscientific education of its practitioners and their rigid adherence to an irrational, unscientific approach to disease causation.

"In 1965, a United States District Court, in upholding a state's constitutional right to refuse to license chiropractors, said that 'since chiropractic claims to be a complete and independent healing art capable of curing almost all kinds of disease, the State Legislature may have felt that the requirement of a foundation in materia medica and surgery . . . would be a protection to the public.' Without dissent, the United States Supreme Court affirmed the decision.

"The wisdom of these decisions by the nation's highest courts justifies the medical profession's educational program of alerting the nation to the public health threat posed by the cult of chiropractic.

"Patients should entrust their health care only to those who have a broad scientific knowledge of diseases and ailments of all kinds, and who are capable of diagnosing and treating them with all the resources of modern medicine. The delay of proper medical care caused by chiropractors and opposition to the many scientific advances in modern medicine, such as life saving vaccines, often ends with tragic results."

At a meeting in October, the Committee on Quackery adopted a "program of action" designed to inform the profession and the public on matters relating to chiropractic, and it was subsequently approved by the Society's Executive Council. Some aspects of the program will need further study and development, and they are subject to final consideration and approval by the Executive Council.

In recognizing the cult of chiropractic as a hazard to rational health care, the Committee will utilize various methods of providing pertinent information to the profession and the public—i.e., IMS JOURNAL; briefing sessions for county medical society representatives; public conferences on quackery with emphasis on chiropractic; etc. The Committee will also study legislative and other mechanisms which might be employed in medicine's efforts to expose the true nature of the practice of chiropractic and all forms of medical quackery.

It is significant that chiropractic coverage was excluded from the Social Security Amendments adopted by the 90th Congress.

The programs and projects undertaken by the Committee on Quackery, with approval from the Society's policy-making bodies, will be conducted on a long-range basis, and it is hoped that the ultimate results will be well worth the time and effort involved.

R. A. BERGER, M.D., *Chairman*

RURAL HEALTH COMMITTEE

The IMS Rural Health Committee met on February 29 with Dr. A. H. Downing, chairman of the Safe Transportation Committee, and Dr. R. C. Larimer, chairman of the Committee on National Emergency Medical Service, for a discussion of ways of improving emergency care for the sick and injured. The members of the Rural Health Committee who attended were representative of rather widely separated parts of the state—Dr. M. E. Olsen, of Minden (Pottawattamie County); Dr. R. S. Clark, of Manchester (Delaware County); Dr. G. H. White, of Des Moines (Polk County); Dr. R. W. Boulden, of Lenox (Taylor County); and the chairman, from Early (Sac County). Last spring, and to some extent since that time, there was a great deal of concern about the continuance of ambulance services in rural Iowa because amendments to the wages and hours law had made such operations so unprofitable that funeral directors were abandoning that sideline. Though Dr. Larimer said he knew of large parts of at least two Nebraska counties which no longer have ambulance service, none of the doctors present knew of any places in Iowa where voluntary groups, service clubs or local governments haven't promptly set up replacements. In a few places, indeed, there may be some wasteful overlapping.

Dr. Downing was asked to report on an AMA conference on emergency medical care that he attended in San Francisco during January. He said that the program there had been planned to cover so large a number of topics that the speakers had time to do little more than call attention to innumerable problems. Furthermore, most of them had urban orientations, with the result that the principal message he could bring home to his fellow physicians in Iowa was that there doubtless are a great many aspects of emergency care, here, which need improvement, but that it is up to Iowans to discover what they are and what can be done about them. He expressed the belief that plans can best be made and carried out at the local or at the regional level, and that because many of the problems are not essentially medical, the best thing for doctors and county medical socie-

ties to do will be to prod civic leaders and local officials into action.

Dr. Downing thought some of the ideas of the San Francisco speakers impractical. They had declared, for example, that an ambulance must never start out unless it contains a trained individual in addition to the driver, and that ambulances must never be permitted to provide mere "taxi service." He said, and the other doctors at the February 29 meeting agreed with him, that invariably there is someone who can ride along with the patient and call the driver's attention in case something goes wrong, and that nowadays when either the government or an insurance company is committed to furnish ambulance service in almost every case of illness or injury, it is impossible to prevent overutilization.

He reported that the Area XI Community College, located temporarily in West Des Moines, will shortly begin offering formal instruction in emergency care of the sick and injured, and that the Polk County Medical Society is helping to provide the instructors. Regional short courses for ambulance drivers, policemen, firemen, etc. in first aid and in transportation of accident victims have been given recently in Iowa City, in Burlington, in Atlantic and perhaps elsewhere in the state, but Dr. Downing proposed that individual doctors and medical societies urge the establishment of regular instruction of those sorts at their respective area community colleges and vocational schools.

Dr. Larimer then was asked to share his thoughts about the improvement of emergency medical care. He said that his IMS National Emergency Medical Service Committee had never really given serious consideration to hazards other than those that might be occasioned by a nuclear attack or a natural disaster affecting considerable numbers of people more or less simultaneously. As an individual, he suggested that every physician and probably all lay people who have occasion to care for patients should learn mouth-to-mouth resuscitation, and that every physician should learn closed-chest cardiac massage. The Iowa Heart Association and its principal divisions are glad to provide instruction in those technics, he said.

He mentioned that the Joint Commission on Accreditation of Hospitals requires—at least on paper—that each hospital it approves have a disaster mobilization plan and practice it at regular intervals. Local medical societies should make sure that those drills are carried out at those institutions, and also at hospitals with 12 to 25 beds, which are too small to qualify for JCAH accreditation.

It was mentioned that the Boone County Hospital has bought an ambulance and is using orderlies and maintenance men as drivers, after providing them some instruction. None of the doctors had heard of any other Iowa hospital where that has been done.

Dr. Larimer said the federal government has helped install and pay for an elaborate communications network in Nebraska that is supposed to link together the health-care, law-enforcement, fire-fighting and conservation workers throughout the state. He and some of the other doctors who had heard of it were sure, however, that it was not yet operational and that it might never become so. The possibility of using planes and/or helicopters in transporting patients was discussed. It was agreed that air transport is not only faster than auto ambulance service but is far easier on the patient, but if airplanes are used there is a need for an auto ambulance at both ends of each run. Helicopters are of limited usefulness in fog, during storms and at night. Some mention was also made of two-way radio communication in emergency medical care. Many doctors have citizens' band instruments by means of which they can be summoned, and a few have more elaborate sets in their automobiles.

The chairman commented that the IMS Rural Health Committee has frequently served as liaison between the IMS, on the one hand, and individual physicians and county medical societies, on the other, in this predominantly rural state, and that it has an opportunity to do so once more in starting programs at the local level for the improvement of emergency medical care of the sick and injured. He reported that the current chairman of the AMA Council on Rural Health, Dr. Ben N. Saltzman, of Mountain Home, Arkansas, is anxious for rural health committees in the various states to take the initiative in this type of work.

Dr. Boulden suggested that a representative of the Rural Health Committee should attend any future IMS meetings at which the improvement of emergency medical care is discussed. The Board of Trustees had already authorized sending a member of the IMS Committee to the AMA National Rural Health Conference in Seattle, late in March, at which the improvement of emergency medical care is to be the principal topic.

The physicians attending the February 29 meeting agreed that county medical societies and individual doctors throughout the state should (1) remind regional health-facilities planning councils to determine the adequacy of ambulance services; (2) see to it that their respective area community colleges and vocational schools offer instruction to prospective ambulance drivers, firemen, policemen, etc. in emergency care of the sick and injured; (3) suggest that their hospital staffs provide special training for emergency-room nurses; and (4) encourage civic leaders and local officials to take the lead in coordinating emergency services of all kinds.

J. W. GAUGER, M.D., *Chairman*

COMMITTEE ON SPORTS MEDICINE

The Committee on Sports Medicine has met five times in this its first year as a part of the Iowa Medical Society's organizational structure. The Committee includes several physicians who have served on a similar committee of the Iowa Chapter of the American Academy of General Practice.

Early in its deliberations the Committee established four subcommittees to consider and be responsible for the following specific areas: Nutrition, Physical Examinations, Athletic Equipment, and Registry of Injuries.

Nutrition—The widely publicized matter of wrestling and weight control has been categorized under nutrition by the Committee. The Committee has devoted a major portion of its time to this subject, particularly since the first of the year. In its early sessions the Committee acknowledged the hazards associated with excessive or ill-advised weight-loss techniques, but it felt the incidence of questionable practices was minimal. However, the recent and extensive newspaper references to unsound weight-cutting practices has prompted the Committee to examine the matter in greater depth and to study ways in which physicians

might have a positive part in alleviating any problems that may exist.

At its January 4 meeting, the Committee indicated its wish that the Society remain positive about the sport of wrestling, for it has characteristics which are not to be found in other forms of athletic competition. The Committee's concern has grown out of reports that crash dieting, dehydration, wearing of rubber suits, using of sweat boxes, etc., are required of young athletes whose body structures and functions may be endangered by such techniques and devices. The Committee is of the opinion that weight determination should be a tripartite responsibility of the parents, the coach and the physician.

The Committee has made periodic references to the AMA Statement on Wrestling and Weight Control, and to the fact that the AMA Statement was endorsed by the 1967 IMS House of Delegates.

In an effort to assist Iowa physicians in determining the desirable weight for high school wrestling competitors, the Committee has under study an "ideal weight determination formula" which has grown out of a research project conducted at the University of Illinois. The study involved some 30,000 physically-fit 4-H boys and girls between the ages of 10 and 18. As indicated, a purpose of this research effort has been to evolve a system for predicting an individual's ideal body weight based on his or her body type. Body measurements used in arriving at this ideal weight are the standing height, hip width, chest depth, thigh circumference and chest width. These measurements are related to a Ponderal Index evolved from the Illinois sampling, and result in what is described as the predicted or ideal weight.

Members of the Committee have applied the formula to high school wrestlers in their respective communities, and on February 14 they met to compare their findings. The findings will require further evaluation before a determination can be made as to their usefulness in the context of wrestling-weight determination. As a next step in the study, the Illinois formula is to be tested on approximately 200 prep wrestlers who will participate in the state high school tournament in March.

If in its further deliberations the Committee is able to devise what it believes to be a workable set of weight-determination guidelines for use by Iowa physicians, these will be presented in the form of recommendations either to the House of Delegates or to the Executive Council.

Physical Examinations—The Committee has devised a physical examination form which it is hoped may eventually be used for all prep athletes in the state. This form is premised on the belief that it should be a permanent record which will follow the student through his junior high and senior high school sports participation. A space is provided on the form for noting an injury sustained during a game. The entry can be made by the physician covering the game.

The Committee has recommended that the high school athlete be permitted to pick up his exam form prior to the end of the school term, in the spring, and have the entire summer to arrange for his physical in a doctor's office. This arrangement, which has been endorsed by the Iowa High School Athletic Association, would tend to eliminate mass examinations given in inadequate and noisy rooms in school buildings.

This form was presented to the IMS Executive Council on September 28, and was approved. It has been transmitted to the Iowa High School Athletic Association, and the IHSAA expects to print it and make it available on an elective basis to all member schools. Efforts will be continued to secure acceptance of the form by the Iowa Girls High School Athletic Union.

Athletic Equipment—The Committee has arranged with the Midwest Conference to conduct an experiment with the molded soccer cleat in high school football competition. This type of shoe will be phased in, starting next fall, and a study will be made over a period of several years of the number and severity of knee and ankle injuries among football players in that conference. The schools cooperating in this experiment include Lake City, Carroll, Sac City, Harlan, Jefferson, Perry, Denison and Audubon. The Committee also has indicated an interest in developing demonstrations regarding proper athletic equipment, with emphasis on fitting.

Injury Registry—The desirability of such a registry in Iowa has been discussed with Mr. Bernie Saggau, executive secretary of the IHSAA. A registry of athletic injuries and deaths has been attempted on the national level, with only moderate success. To date, no specific program has been developed by the Committee.

The subject of pre-season conditioning of athletes, particularly football players, has been discussed at some length. The Committee is aware that Iowa has one of the better required programs, and it has been informed that recommendations for even further improvements are under consideration. At present, the period from August 20 to 24 is set aside for conditioning; during this heat-acclimatation period no equipment may be worn and no contact is permitted. This period is followed by 10 days, extending to the start of the first game, during which contact is permitted. The Committee has provided the IHSAA with a recommended physical-conditioning program as well as a calisthenic program which may be used during the summer months on either a supervised or an unsupervised basis.

The Committee has been authorized by the IMS Executive Council to encourage continued meetings of physicians at the local level; it has also been authorized to distribute a list of conditions that should disqualify youngsters for sports participation, though it is recognized that the final decision regarding the athlete's fitness to participate rests with the examining physician.

The Chairman wishes to express appreciation to the members of the Committee for their conscientious effort in what he feels has been a productive first year.

W. R. VAUGHAN, M.D., *Chairman*

COMMITTEE ON PARAMEDICAL SERVICES

The Society has maintained its interest in the area of paramedical service during the year, even though no formal meetings of the Committee on Paramedical Services have been held.

The concern of the Woodbury County Medical Society in this regard was made known to the IMS Executive Council in January when it proposed a resolution: "That a committee be appointed by the Iowa Medical Society concerning the review of the training and licensure of paramedical personnel, its policies

and principles with Iowa college faculties or the office of the dean, whichever is appropriate."

In reviewing this communication from Woodbury County, the Executive Council noted that several components of the Society have an interest in this subject area. These include the Committee on Paramedical Services, the Committee on Legislation and the Task Force on Medical Manpower. The Council recommended that the Woodbury resolution be transmitted to all of those groups for study.

The subject of licensure of paramedical personnel continues before the Society. The Iowa Association of Pathologists adopted a resolution in October opposing the licensure of medical laboratories and medical-laboratory personnel. That resolution has been transmitted to the Society for its information.

Through the years the Society has encouraged paramedical groups to maintain a strong voluntary registration program in lieu of statutory licensure.

The Committee has been provided information, this year, on a proposed subprofessional training program to prepare persons to function as physical-therapy assistants. Supporters of this proposal cite the shortage of qualified personnel as the reason for recommending this approach. There are others who advocate the establishment of another physical therapy school to graduate fully-qualified personnel. Developments in this area will be followed by the Committee.

J. F. PAULSON, M.D., *Chairman*

STATE CLAIMS REVIEW COMMITTEE

As part of this report comment will be made on the activities of county claims review committees since the 1967 IMS annual meeting. Approximately 250 claims have been referred to county claims review committees for review and recommendation. Although the vast majority of them have related to the Medicare Part B Program, some of the claims reviewed have involved commercial insurance companies and other third parties. These 250 claims have originated in 39 Iowa counties.

In the main, the county review committees have handled their responsibilities in a judicious and timely manner. Unfortunately, situations have arisen wherein claims have not been returned by the county claims review committees within what appeared to be reasonable periods of time. As has been stated in earlier reports, if this most important review function is to be successful, it must be handled as quickly as feasible by the counties.

The State Claims Review Committee has considered claims basically in two areas, (1) where a county claims review committee has not wished to make a recommendation; and (2) wherein the third party has requested additional review of a recommendation made by a county medical society.

During the past year the State Claims Review Committee has considered 38 cases involving 16 Iowa counties. Many of the problems have related to the method of reporting and of itemizing medical services, rather than to the specific fee charged for a medical service. There have been several cases, however, where only the actual fee was in dispute.

The Committee has followed well-established billing guidelines, and for the information of the delegates, some of those guidelines are as follows:

(1) It is customary in Iowa for the surgical charge to cover the surgery, the surgical assistant's fee, and the usual preoperative and postoperative care. For example, if a patient is hospitalized for surgery and such hospitalization includes 10 in-hospital days, the surgical charge is normally the total charge for physicians' services, and no additional billings are made for hospital visits prior to and following surgery.

The position of the Iowa Medical Society with regard to surgical assistants is as follows: "The need for a surgical assistant shall be determined in accordance with hospital and staff regulations. Payment for an assistant at a surgical procedure should be as usually handled in the locality where the services are rendered. The patient must be apprised of the manner in which the professional fees are apportioned."

In following the above policy, the Committee has taken into consideration the charges of both the surgeon and surgical assistant in arriving at the customary charge for the surgery.

(2) When multiple surgical procedures are performed through the same incision, the charge customarily allowed is for the major procedure only.

(3) When multiple surgical procedures are performed in the same operative session but in separate operative fields and through separate operative incisions, the fee may include the full charge for the major procedure and 50 per cent of the customary charge for the lesser procedure(s).

There are many other billing complexities that the Committee has dealt with, but the above seem to be the commonest and perhaps the most widely misunderstood.

The State Claims Review Committee wishes to assure the House of Delegates that it attempts to discharge its responsibilities in a fair and unprejudiced manner. Any physician whose claim has been reviewed by the State Claims Review Committee and who has specific questions regarding the action taken should feel free to ask the Committee for a detailed explanation.

R. S. GERARD, II, M.D., *Chairman*

TASK FORCE ON MEDICAL MANPOWER

In accordance with a recommendation of the 1967 House of Delegates, a Task Force on Medical Manpower was created last spring, consisting of the following sections: Section I—Medical and Paramedical Recruitment and Education; Section II—Physician Recruitment and Placement; Section III—Nurse Recruitment and Education. Subsequent to the initial organizational meeting, an Executive Committee of the Task Force was appointed to coordinate plans for specific projects and to maintain liaison between the three sections.

The Task Force has devoted a major portion of its time this year to physician recruitment and placement. Some additional attention has been given to paramedical and nursing manpower matters. Resource materials and other items of interest have been transmitted to members of the individual sections as they have become available.

Last summer, staff members of the Economics Section—Iowa Regional Medical Program met with IMS and Task Force representatives to review their plans to conduct a survey of all Iowa physicians. The survey contemplated determining number of physicians; train-

ing and research; capacity in terms of division between teaching, research and treatment of patients; type of practice; and factors influencing type of practice and selection of practice location. When those IRMP plans were announced, it was felt that information from a survey of this nature would also be useful to the Task Force in its study of the recruitment, education and location of medical and paramedical personnel in Iowa.

Although the survey was conceived and produced by the Economics Section—IRMP, the Iowa Medical Society lent its name to the project. This was done with authorization from the Board of Trustees and after reports had been made to the Executive Council.

The chairman and other representatives of the Task Force had opportunities to offer guidance and assistance in the development and distribution of the questionnaire which was sent to all Iowa physicians last December. Task Force representatives insisted upon, and IRMP agreed to the following provisions: that the identity of each respondent remain anonymous; that there be no release of raw data obtained from the survey; and that the general results of the survey be made available to other responsible groups only with the acquiescence of the IMS. It was felt that this would serve to reduce the number of surveys directed to Iowa physicians.

Approximately 600 physicians responded to the survey, but many physicians and several county medical societies reacted adversely to the length of the questionnaire and to certain sections which they felt were not relevant to a study of medical manpower.

As announced to the membership in January, following a review of the returned questionnaires by IRMP representatives, in consultation with the Task Force chairman and IMS staff, it was determined by IRMP officials that analysis of the information would serve no useful purpose, and the survey project was officially abandoned by IRMP.

This action was reported to the Executive Council by the Task Force chairman. In so doing, he requested guidance from the Council with respect to the feasibility and desirability of developing an IMS questionnaire to aid the Task Force in its study of medical manpower in the state. In response, the Council recommended that any data-gathering mechanism devised by the Task Force first be made available to a cross-section of Iowa physicians for their comments. The Council also requested that further plans for obtaining information from the membership be reviewed with the House of Delegates before being implemented.

Task Force recommendations regarding information-gathering projects and related matters will be presented to the House of Delegates in a supplemental report at the time of the Annual Meeting.

The Task Force is attempting to establish effective, long-term liaison with students at the University of Iowa College of Medicine in an effort to provide them with information on the merits of practicing in Iowa. The Task Force is also anxious to learn from the students what factors influence the young doctor's selection of a practice site. In this connection, a special discussion concerning medical manpower in Iowa was included as a part of the 1968 Senior Medical Student Conference that was held in Iowa City in January, under the sponsorship of the IMS. In addition, Task Force representatives participated in four medical fraternity smokers in Iowa City during February. These smokers were planned to provide Task Force representatives an opportunity to visit informally with students in all of the medical classes. The Student American Medical Association has tentative plans to conduct a special conference in March at which representatives of the Task Force will have a further opportunity to present information regarding medical practice opportunities in Iowa. This conference will be for all medical students and their wives.

An excellent article titled "You've Got to Know the Territory" by T. D. Throckmorton, M.D., a member of the Task Force, was published in the January issue of SAMA NEWS at the University of Iowa College of Medicine. The article was reprinted in the February issue of the IMS JOURNAL, and subsequently was sent to all news outlets in the state and to all members of the Iowa legislature. Dr. Throckmorton commented on the high quality medicine that is practiced in Iowa, and the advantages of establishing a medical practice in the state.

Representatives of the Task Force arranged and participated in a special television panel discussion concerning medical manpower resources and needs in Iowa, aired over KDPS-TV, Des Moines, on January 18. Other panel members included R. F. Birge, M.D., president of the Iowa Medical Society, Robert C. Hardin, M.D., vice-president, medical affairs, University of Iowa, Miss Elizabeth Kerr, R.N., director, Program in Health Occupations Education, University of Iowa, and Donald Cordes, a Des Moines hospital administrator.

The Task Force will devote special attention to the development of a report concerning the "State of Health Care in Iowa" which is to be released in the fall as a special section in the DES MOINES SUNDAY REGISTER. Although this news feature is being prepared and spearheaded by the IMS, other professional and health-oriented organizations will be invited to share in supporting the project.

If feasible, the Task Force hopes to arrange a statewide conference on medical manpower in the fall, to coincide with the publication of the newspaper supplement. It is the opinion of the Task Force that a conference of this type would serve as a forum to educate the profession and community leaders throughout the state on the problems relating to medical manpower. It would also serve to let the public know what the IMS and other interested groups and agencies are doing in an attempt to resolve those problems.

Copies of the "Report of the National Advisory Committee on Health Manpower," which was submitted to the President of the United States in November, have been provided to members of the Task Force for their information and review. The AMA also has this report under study.

The Task Force is cognizant of the financial inducements which have recently become available to Iowa medical students who promise to remain in the state and serve as general practitioners. These new loan programs have come about through legislation passed by the Iowa General Assembly and through modifications which have been made in the long-standing loan program of the Iowa Medical Foundation.

The Task Force is confronted with a wide range of complex problems, and it will continue to seek solutions that are in the best interests of the profession and of the citizens of Iowa.

B. M. MERKEL, M.D., *Chairman*

COMMITTEE ON VOLUNTARY HEALTH AGENCIES

It may be of interest to note that the AMA House of Delegates at its Clinical Session last November approved criteria recommended for use in evaluating the medical programs of national voluntary health agencies. Those guidelines were prepared by the AMA's Council on Voluntary Health Agencies with the cooperation of medical directors and chairmen of medical advisory committees of the major national voluntary health agencies. The guidelines are concerned only with medical programs and not with the organizational structure or financial aspects of the organizations.

It has been recommended that those criteria be adapted for use by state and local organizations. They declare in part, that "A sound medical program, based on established need, is conceived and administered by a national medical director with the active policy guidance of a medical advisory committee. This medical direction and support enable the agency to develop its program on the basis of sound medical practice and provide liaison with organized medicine for the interpretation of agency policy and mediation of professional problems. This principle should apply at all levels of operation."

Even though the Committee has had no specific matters referred to it and has not had occasion to meet, the chairman is nonetheless pleased to note the leadership given by many Iowa physicians to the voluntary health organizations which are active in Iowa. It is important that doctors provide as much guidance and leadership as possible to these numerous organizations.

The 1967 Iowa State Fair "Hall of Health" provided an opportunity for the Society to work cooperatively with three voluntary health organizations. These three organizations accepted an invitation to provide health education exhibits for the "Hall of Health" which is co-sponsored by the Iowa Health Council and coordinated by the Iowa Medical Society.

C. E. SCHROCK, M.D., *Chairman*

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Advisory Committee to the Woman's Auxiliary reports that Iowa's organization for physicians' wives continues to cooperate with county medical societies and with the IMS in various programs and activities, as its services are asked for or are needed. Tools provided by physician-husbands, by the Iowa Medical Society, or by the Auxiliary make the members uniquely qualified to work for better community health. The interests of the members' husbands in the field of health are also the Auxiliary's interests.

Auxiliary members are qualified to provide leadership in health education, and to help in disseminating authentic information, in recognizing local needs and initiating action for meeting them, and in providing liaison between the community and their busy doctor-husbands.

The State Auxiliary's president chose as the organization's objective this year, "Focus on Values." In consequence, the members have had an opportunity to focus their attention upon and to gain a clear picture of the goals each member and the Auxiliary as a whole want to achieve during the year.

The Health Careers Committee has assisted in recruitment by contacting all high school counselors. As a result, 450 requests for library and program materials were received, and kits containing health-career information were mailed to all 450. Many counselors asked for instructions about organizing Health Career Clubs, and they were furnished materials and provided help of other sorts. The Auxiliary continues sponsoring and assisting with Future Nurses Clubs and Health Career Clubs in junior and senior high schools.

HELF (Health Education Loan Fund), AMA-ERF and Iowa Medical Foundation. Recognizing the ever-increasing urgency of continued support for these undertakings, the Auxiliary engages in various fund-raising projects for them at the county level.

The State Auxiliary's Health Education Loan Fund has made 85 loans since it was started in 1941. The fund, totaling well over $15,000, is available to students in approved schools in several allied health fields, though nearly all of the loans have gone to nursing students. In addition, several county Auxiliaries have separate loan funds or scholarships available to nursing students in their own communities.

The Iowa Auxiliary's goal for contributions to the American Medical Association's Medical Education and Research Foundation in the current year is $5,000, a sum which has been very nearly realized, thanks to the physicians' response to the chairman's appeal. Several memorial contributions have been made to Iowa Medical Foundation.

Homebound Handcraft sales, conducted each year in eight cities over the state, continue as an outstanding Auxiliary service project in cooperation with the Easter Seal Society for Crippled Children and Adults of Iowa. The merchandise offered for sale has been greatly improved, and thus a greater volume of sales has been achieved. Department stores cooperate by making sale space available, and the sponsoring county Auxiliary provides sales people and other workers who are involved in arranging for the sale. Thus some mercantile firms and many members of the Auxiliary have definite roles in a rehabilitation program unique in Iowa.

The Auxiliary continues its interest in health legislation, and cooperates with the IMS in informing its members and making them knowledgeable on such topics. Members are also encouraged to exercise their right to vote and to take active roles in their respective political parties.

THE WOMAN'S AUXILIARY NEWS continues to disseminate information about the organization and its projects. It appears in each issue of the JOURNAL OF THE IMS, and in reprint form it is mailed to all Auxiliary members and to junior and senior medical students' wives. The requests from other Auxiliaries and from National Auxiliary officers to be put on the mailing list indicate its value in providing information.

One new program, "Friendly Visitor," was approved for implementation this past year. It helps meet needs in all communities. Homemaker-Home Health Care programs and Meals on Wheels are supported by Auxiliaries in cooperation with other community organizations.

International Health Activities have continued as popular projects. Nearly all counties have participated in all phases of "I Have Aided."

The Mental Health Committee has urged participa-

tion in the nationally recommended program "Study of Adolescence in Early Adulthood," though all of the other mental health programs are continuing ones.

The county Auxiliaries' Rural Health Committees have assisted in tetanus immunization programs, and continue urging particular attention to rural safety programs.

There are many other projects carried on at county level, such a vision screening, and various safety programs, and members participate as individuals in the health programs of other community organizations. All programs in which Auxiliaries take a part have been approved by the appropriate medical societies.

With hard work on the part of enthusiastic and knowledgeable members and with physicians encouraging their wives to participate, there is no doubt that the organization will continue fulfilling its special role. The Committee urges physicians to support the Auxiliary in every way possible.

The president of the organization reports that to date she has traveled 10,087 miles in Iowa, met with 434 members in their counties and has been gone from her home 75 days.

C. W. SEIBERT, M.D., *Chairman*

(This concludes the material that was published in the HANDBOOK FOR THE HOUSE OF DELEGATES.)

At this time, Dr. Paul M. Kersten, speaker, appointed Dr. Robert E. Jongewaard, of Wesley, to replace Dr. Ralph P. Lagoni, of Eldridge, on the Reference Committee on Reports of Officers.

Dr. Kersten then introduced Dr. George B. Callahan, first vice-president of the Illinois State Medical Society, who addressed the House briefly. Mr. Arthur Seeds of the Field Service Division of the American Medical Association was also introduced.

The presentation of Supplemental Reports was the next order of business, the first of which was the Reports of Officers. Each report was referred to the appropriate reference committee for study.

REMARKS OF R. F. BIRGE, M.D., IMS PRESIDENT

(Referred to the Reference Committee on Reports of Officers.)

These are tumultuous times in which we live.

On the international scene, with our forces on the brink of success, we have seen the pendulum of war swing in the direction of negotiation.

On the national scene we have seen the Supreme Court rewrite the Constitution. We have seen an assassin's bullet create a martyr unique in American history. We have seen presidential candidates do flip-flops.

Here at home, people drive the wrong way on interstate highways.

The course of history has had other interludes equally vexing, and personalities just as forceful. Nonetheless, now is an amazingly interesting time to be alive, a time which is certainly tumultuous. Let us hope that our American heritage survives the turbulence.

While serving as your spokesman during this, the Iowa Medical Society's 118th year, I too have noted the turbulence. But it has been an interesting time to serve in office, and I wish to take this occasion to thank you for that privilege.

Ours is a great medical society, and the century-plus of its existence represents a professional heritage of which we can be proud.

Maintenance of our heritage, however, requires dedicated, ongoing effort from leaders such as yourselves. The times are too tumultuous, the waves too turbulent for us to rest on our oars.

I shall not attempt to recount my experiences in office. Let us instead look ahead, and consider three areas of concern which I believe require your attention.

My brief references to these important issues are proffered in the hope that you will support a remedial measure which I shall propose.

First of all, I'm concerned about so much loose talk about the cost of medical care. A matter which possesses limitless dimensions and far-reaching implications, the topic seems to garner space on page one of our daily newspapers nearly as often as the weather forecast.

Few will deny that public attitudes are formed in large measure by the mass media. None of us is so naive as to disregard the effect of continual bombardment of the public with stories about "health care" costs—stories which are distorted, misleading or, at best, lacking in completeness. They abound with words like "soaring," "mounting," and "sky-rocketing." As the reader assimilates this constant commentary, it seems certain he will become ever more disillusioned with the economics of our field of endeavor.

In a recent President's Page, I called to your attention a LOOK MAGAZINE article wherein it was asserted: "The state of our nation's health is bad.... Only by one measurement does the United States excel all others—cost of illness."

This kind of irresponsible reporting serves only to create chasms in the bedrock upon which the doctor-patient relationship is built. It destroys established confidences and accomplishes nothing. Yet it goes on.

Means of countering irresponsible allegations against us must be found.

Means of gaining the initiative must be sought by the profession so that valid information may be reported to the people.

Organized medicine, through its network of state and county medical societies, has the potential to be the public's greatest ally in controlling expenditures for medical services. While the burgeoning federally-financed medical programs may bewilder the busy practitioner, he must nonetheless recognize his important responsibilities with respect to the cost of medical care. He must be attuned to the local marketplace, and he must support peer review of his charges by his county medical society colleagues.

No one group is better prepared to assume the role of guardian of the consumer's interest in expenditures for medical care than is the medical profession itself. Leadership in this area is essential.

To yield this leadership is to yield our very control of the practice of medicine.

I'm concerned about another ominous cloud gathering on the horizon.

In medical lexicon, the term "group practice" is generally understood to mean a group of physicians—either in a multi-specialty or single specialty situation—working together as partners or associates and sharing facilities, yet representing in every way the traditional private practice of medicine.

In contrast to our concept of group practice, social planners, who foisted upon us a something-for-everybody Medicare program, are vigorously touting a totally different program under the same name. It's a sputtering system of regimentation long known to us as closed-panel medicine.

In the form of a labor-and-management-controlled prepaid plan, it has existed for some time, but its growth has been minimal over the past 15 years.

Seventeen states, including Iowa, prohibit this kind of medical-care delivery.

Now, however, open and concerted effort is being made by government, by labor and by others to remove the barriers which preclude the formation of such group programs. Advocates of the approach proclaim high quality and lower costs, and openly call for repeal of state laws which bar consumer-sponsored group plans.

Public acceptance and broad implementation of a government-labor-consumer-dominated panel system will wrest from the physician what remaining control he has over his own professional destiny.

We must speak up loudly, clearly, and repeatedly in opposition to this form of so-called "group practice."

My final area of concern relates to production and distribution of adequate medical manpower.

Today we have many dollars—governmental and other kinds—chasing after services which are plentiful, adequate or scarce, depending on where you live. When and where the supply falls short of the demand, the cry "crisis" is heard.

Few will deny the existence of the problem. It is the magnitude of the problem which has been astonishingly exaggerated.

Nevertheless, there is an urgent need for action in this area. There is a need for the medical profession to exert a full measure of its energy to expand its own ranks and the ranks of those who work with us. There is a need to look with an open mind at systems which promote efficiency without jeopardizing the doctor-patient relationship.

These things we are doing!

Yet, if health-care-crisis assertions have substance, the answer is by no means a simple matter of numbers of personnel. We shall never be able to produce enough personnel to satiate those who pursue the fountain of youth with free federal dollars!

Our manpower problem has also to do with distribution, with more prudent use of sophisticated and costly facilities and equipment, and with the return to private practice of numbers of physicians who have been diverted to military and federal administrative work.

Here in Iowa, as on the national level, medicine must continue to act in a positive fashion in the manpower area. It must be imaginative, forceful and productive if it expects to be the quarter-back and captain of the team, as it rightfully should be.

These three areas—the allegedly excessive cost of medical care, the threat to private practice posed by closed-panel advocates, and the need for more medical manpower—are among the principal challenges we must meet without hesitation or delay.

The public accepts as fact much radical commentary on these and other medical subjects, for one single reason: American medicine has not adequately stated its case to the people.

American medicine needs a spokesman!

On June 17, 1967, news commentator Paul Harvey, in speaking to the Conference of State Medical Society Presidents and Other Officers, laid it on the line when he said: "For most of two decades, the doctor has been losing his voice. Big steel has a spokesman; so do the steel workers. Someone representing medical interests must headline indictments with equal boldness."

Mr. Harvey explained: "A news analyst cannot possibly be an authority on every subject which he is required to discuss. Generally, therefore, we come to rely on the counsel of experts in each field."

"But in the urgent policy matters relating to medicine, where can we go?," Mr. Harvey inquired.

"Recently and presently the news media have most often accepted as the 'last word' the word of the Surgeon General of the United States.

"I do not believe the Surgeon General, however capable he may be, is the proper person to speak for the medical profession. He is a bureaucrat, necessarily parroting the party line of any incumbent political administration."

He continued: "Recently, in a series of . . . sensitive areas . . . the news media have been brainwashed with the 'Government' point of view—because modern medicine has no other effective voice."

In a spirit of high regard for the medical profession, Mr. Harvey urged that "the American Medical Association again figure out some way to effectively speak through some one with one voice."

Because it seems to me that we cannot afford to ignore the challenge expressed so clearly by Mr. Harvey, I indicated in my final President's Page my desire to have the House of Delegates of the Iowa Medical Society give attention to this vocal void.

Therefore, I submit for your review the following resolution, and ask that it be considered for transmittal to the AMA House of Delegates:

Resolved, that organized medicine, through its American Medical Association, consider strongly the designation of a spokesman with continuity in office empowered to speak out promptly and forcefully on the important medical issues of the day, to the end that the private practice of medicine will strengthen its position with the public and will overcome those who would seek to divide or destroy the profession.

Thank you.

SUPPLEMENTAL REPORTS OF THE BOARD OF TRUSTEES

SECTION I—GENERAL ACTIVITIES

Presented by J. H. Sunderbruch, M.D.
Chairman, Board of Trustees

(Referred to the Reference Committee on Reports of officers.)

At seven o'clock this morning, the Board of Trustees met in official session for the 12th time since the 1967 Annual Meeting.

During these past twelve months . . .

. . . The Board has been called upon to take action on approximately 300 items, ranging from authorizing the removal of a diseased dutch elm tree on the Society's property, to developing recommendations to promote and advance usual, customary and reasonable fee programs;

. . . it has reviewed minutes of all committee meetings in order to keep abreast of the many programs and activities of the Society;

. . . it has, in consultation with the president, established special committees to consider and make recommendations on specific problems;

. . . it has made every effort to enhance the stature and widen the scope of influence of the Iowa Medical Society, through firm and responsible leadership;

. . . it has endeavored to maintain an effective, efficient, streamlined organization so that the dues paying members—individually and collectively—can be assured of getting "their money's worth."

I am not going to discuss every action taken or every project undertaken this past year. These have been summarized for you in the HOUSE OF DELEGATES HANDBOOK, and additional information from several of the committees will be presented today. There are, however, a few items that deserve special attention, and I shall briefly highlight them.

At the direction of the 1967 House of Delegates, a subcommittee of the Board of Trustees was appointed last spring to conduct a study and to make recommendations on matters relating to intraprofessional communications. Dr. Sam Leinbach, immediate past-president, served as chairman, and other members were Dr. P. J. Leehey, vice president, and Dr. Tom Burcham, treasurer.

As Dr. Leinbach stated in an address to the House last year, "There can be little understanding without effective communication, and without understanding there can be little unity, and without unity, the medical profession's much-envied professional status stands in jeopardy."

Over the years, the Society has made every effort to establish proper lines of communication to—and from—the membership, and also within the organizational structure.

We have relied primarily on the JOURNAL, the NEWS BULLETIN and our field service staff to maintain contact with the membership. There is also a constant interchange of information at the committee and officer level. For example, members of the Board of Trustees study the minutes of all official committee meetings, and specific committee recommendations, as well as informational reports on major projects, are presented to the Executive Council.

In hopes of improving our lines of communication to the membership, and in accordance with recommendations of the special subcommittee of the Board, the Society is now issuing a monthly bulletin called IMS REPORT to all officers of the IMS, to all members of the House of Delegates, and to all county medical society presidents and secretaries. Through this mechanism we are able to provide, on a regular basis, up-to-date information on new and continuing projects, and to highlight important actions of the Board of Trustees and Executive Council.

County society presidents have been urged to review information contained in the IMS REPORT at monthly meetings so that all members will be aware of what is occurring in organized medicine at the state level.

Unfortunately, the Society faces the same problem as the farmer who leads his horse to water, but can't make him drink. Certainly, we can provide the members with JOURNALS, NEWS BULLETINS, and IMS REPORTS, but we can't make them read those materials. We can schedule special conferences featuring presentations by nationally prominent speakers on medical-socio-economic and political issues of major importance to the profession, but we can't force the members to attend.

Although the task is not an easy one, I assure you all means available will be utilized to stimulate interest in the affairs of the Medical Society, and to eliminate the "ho-hum syndrome" which has afflicted some of our members.

Early last fall, the Board of Trustees was apprised of an action taken by the National Association of Blue Shield Plans "to have approval by either a sponsoring medical society, or by the Plan holding participating agreements with a majority of physicians actively practicing in the Plan area." This development making optional medical society approval caused considerable consternation among your officers and this consternation was followed by vigorous efforts to reverse the action. Further reference to this matter is included in that portion of the Report having to do with Blue Shield.

Over the years, the House of Delegates has affirmed —and reaffirmed—physicians' usual, customary and reasonable fees as the proper basis for payment by all third parties. Your officers have established a firm and positive position in successfully advancing this concept.

To illustrate, let me remind you that as a result of our negotiations with the Board of Social Welfare, the Title XIX program in Iowa is being administered on the basis of usual, customary and reasonable fees, rather than on a fixed fee or fixed percentage schedule.

Officials of the Society were also successful in negotiating a usual and customary fee contract for the Military Dependents' Medical Care Program.

Finally, I am sure you recall that as a result of joint conferences between officials of the Medical Society and Blue Shield, the Blue Chip contract has been replaced with the existing Comprehensive Contract, which pays the individual physician his usual and customary charge. Dr. Wicks will have more to say about this, and related matters, in another section of the Board of Trustees' Supplemental Report.

Last spring, the House of Delegates was informed that plans were underway to reorganize the Iowa Interprofessional Association as the "Iowa Health Council," and that has been accomplished. Current members of the organization are the Iowa Medical Society, the Iowa Dental Association, the Iowa Veterinary Medical Association, the Iowa Pharmaceutical Association, the Iowa Nurses' Association, and the Iowa Hospital Association.

The new Articles of Incorporation and Bylaws provide for the inclusion of additional health and health oriented groups. Increased membership should enhance the opportunity for the Iowa Health Council to promote common goals and objectives of the member organizations. I wish to emphasize that no group will be invited to join the Iowa Health Council without unanimous approval of all current members.

Although the Society's progress in spearheading the creation of an Iowa Association of the Professions has been slow, it has been steady.

In December, representatives of the IMS hosted a planning meeting attended by officials of the Iowa Veterinary Medical Association, the Iowa Pharmaceutical Association, the Iowa Dental Association, the Iowa Engineering Society, the Iowa Society of Architects, and the state organization of Certified Public Accountants. As a result of that meeting, Dr. Otis Wolfe was designated chairman of a steering committee which will develop proposed objectives, purposes and structure for this new organization. I'll ask Dr. Wolfe, a past president, to address the House briefly on

the developments with respect to the proposed Iowa Association of the Professions.

(Dr. Otis D. Wolfe then spoke briefly, and the complete report on the proposed Iowa Association of the Professions follows the Board of Trustees report presented by Dr. Sunderbruch.)

In February, representatives of the Iowa Medical Society met with officials of the State Board of Pharmacy and the Iowa Pharmaceutical Association to review federal and state drug-abuse-control regulations, and to discuss enforcement policies and procedures that may be invoked against physicians. The meeting was scheduled by the IMS immediately following the seizure of depressant and stimulant drugs from a Des Moines medical clinic which, through a misunderstanding, had failed to comply with record-keeping requirements under the law.

The Medical Society took that opportunity to emphasize to state drug-abuse-control authorities that Iowa physicians are anxious to suppress illicit traffic in controlled drugs. However, it was also pointed out that because of the relative newness of the drug control provisions, it was conceivable that some physicians. through lack of knowledge or understanding, may have failed to keep the complete and accurate records required by law.

The Society was informed that the Department of Health, Education and Welfare had sent a letter to all physicians outlining the federal drug abuse control amendments of 1965 and listing the drugs under control. More recent information indicates that such a letter had *not*, in fact, been distributed, at least in Iowa, and that fact has been pointed out to proper authorities.

In any event, the IMS took immediate steps to provide detailed information to the membership regarding federal and state drug-abuse-control provisions. A NEWS BULLETIN was sent to physicians on February 14, and this was followed by a more comprehensive report in the March issue of the JOURNAL. In addition, a special kit of materials relating to controlled-drug record-keeping and inspection requirements was put together by the Society, and is available on request. Over 200 kits have already been mailed to Iowa doctors.

Representatives of the IMS have emphasized to Iowa drug-abuse-control officials that appropriate federal and state agencies share responsibility for apprising physicians of governmental regulations which relate to the conduct of their practices. The Medical Society has requested that it be kept informed of any future important rulings regarding controlled drugs and related matters.

Physicians will continue to be affected by the encroachment of federal and state programs on the practice of medicine. For that reason, officers and other representatives of the Society have taken an active interest in the activities of the Health Planning Council of Iowa, a voluntary organization; the Iowa Regional Medical Program established under Public Law 89-239; and the State Comprehensive Health Planning Program established under Public Law 89-749.

As you know, the Iowa Medical Society is primarily responsible for the creation of the Health Planning Council of Iowa, and it has provided substantial support to that organization in terms of money, material and manpower. Dr. Homer Skinner, of Carroll, represents the IMS on the HPCI Board of Directors, and he has served as its president since it was officially organized two years ago.

The Health Planning Council of Iowa has made significant progress in stimulating and assisting in the development of voluntary health planning councils at the regional and local levels. Unless something unforeseen happens, it will obtain the services of a full-time executive director on July 1. Consequently we can anticipate even greater activity in the voluntary health-planning movement within the state.

Dr. Skinner has been appointed to membership on the Advisory Council to the State Comprehensive Health Planning Program. You may recall that under P.L. 89-749 each state is required to develop a comprehensive health-planning program under the administration of a single state agency, and that the State Department of Health has been so designated in Iowa. The Advisory Council consists of representatives of state and local governments, representatives of private organizations, and a majority of consumer representatives.

The IMS is officially represented on the Advisory Group to the Iowa Regional Medical Program by Dr. Sam Leinbach, and Dr. Frank Ober serves as alternate representative. I can assure you that these men properly reflect the Society's position that IRMP programs should in no way infringe upon the private practice of medicine and the traditional doctor-patient relationship.

Dr. Leinbach and Dr. Ober also co-chair a special Society committee on IRMP and Comprehensive Health Planning, and I should like to call your attention to the following committee recommendations which were approved by the Executive Council on January 17:

1. That every effort should be made to maintain and enhance the influence and effectiveness of the Health Planning Council of Iowa, and it should continue its efforts to stimulate and assist in the formation of local and/or regional voluntary planning groups.
2. That it is incumbent upon individual physicians in general, and the IMS in particular, to keep informed on the proposed projects and goals of the regional medical and comprehensive health planning programs.
3. That since these programs do have desirable features and objectives, the IMS, through its representation on appropriate advisory councils and committees, must involve itself in the planning phases in a cooperative manner so that, when appropriate, expert medical guidance and leadership can be exerted to discourage the implementation of ill-conceived programs that are neither practical nor feasible, and would be incompatible with the traditional patterns of patient care and professional practice.

In January, Dr. Elmer Smith resigned as director of medical services for the State Department of Social Welfare in order to accept a temporary assignment in Viet Nam. Mainly through Dr. Smith's efforts, excellent liaison and cooperation has been established between the Board of Social Welfare and the Iowa Medical Society.

Following Dr. Smith's resignation, the Executive

Council directed the Society to do everything possible to assure that his successor would have a "similar understanding of the social, economic and political elements in our society" and be "imbued with the traditional concepts of the practice of medicine."

Approximately one month ago, Dr. Otto Glesne, of Fort Dodge, a past-president of our Society, was named to succeed Dr. Smith. Need I say more? On April 16 he began his service as Medical Director in the reorganized State Department of Social Services.

I should like to have Dr. Glesne, a past-president of the Society, come forward and make a few comments. I believe too he has with him a newly appointed state official with whom the physicians of Iowa should be acquainted.

(Dr. Otto N. Glesne, acknowledged the introduction and in turn presented Mr. Maurice Harmon, the new Commissioner of Social Services.)

In response to a directive from the 1967 House of Delegates, a Task Force on Medical Manpower was appointed last spring to evaluate the medical manpower situation in Iowa, and to develop programs designed to maintain and attract a sufficient number of physicians and allied health personnel for the state. A detailed report from the Task Force appears in the HANDBOOK, and a supplemental report will be presented to you later this morning by Dr. Byron Merkel, chairman of the Task Force.

In order for the Task Force to carry out its assignment, the Society must be prepared to underwrite, within reasonable limits, necessary expenses to implement anticipated projects, some of which will be outlined by Dr. Merkel.

The Task Force is faced with a complex and time-consuming study, but it is undoubtedly one of the most important ever undertaken by the Iowa Medical Society.

The Society is now working on a special communications project which we feel has significant potential. This unique project is a report to the citizens of the state on the "State of Health Care in Iowa." The report will take the form of a 16-page PICTURE MAGAZINE supplement in the DES MOINES SUNDAY REGISTER. The proposed date of publication is Sunday, November 24, 1968.

Letters were sent March 12 to approximately 100 organizations inviting them to share in the financial support of the project. Invited as co-sponsors were those Iowa organizations whose members have an actual part in the delivery of health care; those firms that manufacture and market pharmaceuticals, equipment, etc., in Iowa; those that insure Iowans against accident and illness, and others that recognize the great importance of a healthy population. To date, approximately one-third of the financial support needed has been committed.

While on the subject of providing information to the public through the communications media, may I direct your attention to the revised "Code of Cooperation" which is included in your Packet. As reported in the HANDBOOK Report of the Committee on Public Relations, the Society has provided leadership this year in revising and reprinting the Code. The Code has proved valuable and useful in the development of sound medical news reporting practice at the local level. It will be distributed to all Society members.

The guiding force in the growth and efficient activity of your Society is vested in Don Taylor and his staff. Those people are recognized as tops in organizational medicine. This is evidenced by the frequent requests for advice and counsel which come from other states and from the national level.

I should like to take this opportunity to recognize these fine people who are your representatives. Will you please stand for a deserved hand.

In closing this section of the Supplemental Report of the Board of Trustees, I want to point out that the programs developed within the structure of the Iowa Medical Society provide excellent measures of achievement. The result of this measuring—of this summing up—demonstrates continued growth and progress.

I am sure it is apparent to you that increasing demands are being made upon the resources of the Iowa Medical Society. In response, we can do one of two things:

We can move forward with existing and potential new programs, or
We can attempt merely to "hold the line" with the inevitable result of slipping backward.

The choice, of course, is yours. I encourage you to select the first course.

It is now my privilege to introduce Dr. Kenneth Lister, a trustee, who will present Section II of the Supplemental Report of the Board of Trustees, which relates to finances.

SECTION I—EXHIBIT A

REPORT ON PROPOSED IOWA ASSOCIATION OF THE PROFESSIONS

Presented by Otis D. Wolfe, M.D.

This report is for the purpose of informing the 1968 House of Delegates about the progress made this past year toward the establishment of an Iowa Association of the Professions.

As you presumably know, the Iowa Medical Society has sought during the past several years to stimulate interest in the formation of a horizontal-type organization which would foster the concept of professionalism. That effort stems from a request of the House of Delegates that the Society provide leadership in the development of an Iowa Association of the Professions.

For your background information, there are now seven states with active organizations of this type. Wisconsin is the most recent addition to the list; Michigan's, as you perhaps know, is senior among the state organizations, and has been the prototype for the others.

As was reported to the House of Delegates last year, an organizational steering committee has been constituted to explore in depth the feasibility of an Iowa Association of the Professions. This committee consists of two representatives from each of the professional organizations which have demonstrated an interest in the proposed IAP. In addition to the Medical Society, the groups involved include the Iowa Veterinary Medical Association, Iowa Engineering Society, Iowa Pharmaceutical Association, Iowa Dental Association, Iowa Society of Certified Public Accountants and the Iowa Chapter, American Institute of Architects. The Medical Society is represented by S. P. Leinbach, M.D., Belmond, and O. D. Wolfe, M.D., Marshalltown.

The committee was called together on December 20, 1967, by the Iowa Medical Society to review past activity and to chart a future course. At that meeting

a concise and tentative statement of purpose was offered for the proposed organization, "to promote and preserve professionalism." That brief phrase was considered acceptable as a starting point.

Although most of the groups have indicated a desire to move ahead with the organizational procedures, several have expressed some reservations as to the need for this kind of organization. They seem fearful that the proposed organization will overlap or duplicate the activities now carried on by the separate associations. All, however, I am pleased to report, have indicated a willingness to participate in further deliberations on the subject.

At the December 20 meeting an *ad hoc* committee was authorized, and that committee has now been constituted. It will consist of one representative from each of the groups. It has been requested to formulate a statement of purpose and to consider the preparation of tentative articles of incorporation and bylaws. The achievements of this *ad hoc* committee are to be reported back to the parent organizational committee for study and possible approval. Subsequently, it is anticipated that the recommendations which are developed will be directed to the governing bodies of the several organizations, for either acceptance or modification. With this step successfully completed, the Iowa Association of the Professions could be close to reality.

The eight-member *ad hoc* committee is scheduled to begin its work with a meeting on May 8. In an effort to provide useful background information for the committee, the Medical Society recently conducted a survey of the state associations of the professions now in existence. The results of that survey have been compiled and provided to the members of the *ad hoc* committee.

It perhaps deserves mention that attempts to stimulate the interest of the Iowa Bar Association in this kind of an organization have not been productive. It is anticipated these efforts will be continued, as possible.

In summary, then, it may be reported that the proposed Iowa Association of the Professions has moved forward a reasonable distance this past year. Those involved in the formative process are approaching the project with open minds. And it seems fair to conclude that out of this deliberate consideration will evolve an organization capable of enhancing the total concept of professionalism. When one contemplates a statement such as the one attributed to an elected official of our state government, to wit, "The public must be protected from the professions," the need for an organization to acquaint the public with the meaning of professionalism becomes most obvious.

SECTION II—FINANCES

Presented by Kenneth E. Lister, M.D., Trustee

(Referred to the Reference Committee on Reports of Officers.)

It is fortunate this report on finances can be presented prior to that of the Nominating Committee. There may be a contest for the office of trustee!

The members of the Board of Trustees of the Society are practical men—not economists but physicians who have an appreciation of the value of the dollar and a deep sense of responsibility, for they realize they are committing other people's funds as well as their own. They recognize that the fiddler must be paid, and that he who pays the fiddler calls the tune. They appreciate the importance of the Society's having a strong voice in directing and influencing the programs and projects in which it has an interest. This is the Board's basic financial philosophy.

In presenting this report, it is not my intent to make a sales pitch, but rather to state the fiscal facts as we see them and then be governed by the decisions of this House.

Effective January 1, 1965, dues were set at $125.00 per member, and a major portion of that dues increase has been committed to financing and maintaining the IMS headquarters building. During the planning stages for the new offices, it was reported to the House of Delegates that the project would be financed principally from a $300,000, 5½ per cent, 10-year mortgage. However, we did not borrow the full $300,000 because of funds received from sale of the old IMS office building, from a building fund account and from an excess of income over expenses in 1965. To conserve interest, we borrowed only as funds were needed, and we accelerated amortization on the building for a mortgage retirement in 1972.

Where proper and justifiable, we underwrite certain of the Society's operational costs from income derived from the related programs that we administer, such as the Iowa Medical Foundation and the Military Dependents' Program, as well as certain services provided to Blue Shield. However the Board of Trustees is inclined to take a cautious attitude in this approach, because it believes the Society should rely on its own sources of financing rather than on its outside income, especially where principle might be compromised or sacrificed.

Present payments on the building—principal and interest—amount to $39,000 per year. Other building-related costs such as property tax, light, gas, water and maintenance add another $17,000, representing an increase in the Society's fixed obligations of over $50,000 since 1966. Add to that a 6 to 10 per cent yearly increase in the cost of doing business, and income from the dues increase in 1965 is fully absorbed. Under the present payment schedule the building mortgage will be retired in 1972, but we have the option of extending it to 10 years, or 1976, but it would add $17,000 in accumulated interest.

Another alternative for the House to consider is the sale of the piece of ground, approximately one acre, that adjoins the property on which the Society building is located. The estimated value of that property is somewhere between $35,000 and $45,000. The present thinking of the Board of Trustees is that the land should be retained by the Society because there is reason to believe its value will appreciate markedly in the next few years.

In light of the circumstances previously outlined, it would appear the Society has the following alternatives to consider:

1. Extend the amortization period on the building to 1976. That would make available an additional $17,000 per year for operating purposes. However, that alone would not enable the Society to operate in the black in 1969, because '69 will be a legislative year which will add $20,000 to $30,000 to expenses.

2. Couple the mortgage extension with sale of the remaining unused property in West Des Moines. Following this approach, and in the absence of some unexpected contingency, the Society should have income in excess of expenses through 1969.

3. Increase the dues $25.00 effective January 1, 1969; leave the payoff schedule on the building unchanged; and continue ownership of the extra property.

In summary, the Board of Trustees is inclined to favor the final alternative for the following reasons:

1. An increase in dues would provide necessary cash flow for the next few years. A $25.00 dues increase computed on the basis of 2,150 dues paying members would produce approximately $52,750 in additional income beginning in 1969. Applying $15,000 of the additional income on the contemplated '68 deficit and allowing for expenses in excess of income of $35,000 in '69, the dues increase in '69 would be almost fully committed. In the absence of some unexpected emergency, it would appear that with the dues increase of $25.00 in '69 the Society should be able to meet its commitments through '72 and perhaps add a modest amount to reserves, especially in 1970, an off-legislative year, unless, of course, the Legislature elects to meet annually. Then in 1973, after the mortgage has been retired, we should be headed for real financial recovery.

2. Leaving the amortization schedule as is will permit a savings of approximately $17,000.

3. Holding the extra land for sale at a more appropriate time may very likely enable the Society to experience a much greater appreciation of its original investment.

The members of the Board of Trustees earnestly request the advice and guidance of the delegates in establishing a long range fiscal policy. We have been inclined to follow a line that seems to square with our own personal spending practices, which is simply to save and earn where possible. If this is not the concept the House of Delegates wants followed, then the time for change is now. Let me emphasize that the Society can meet its financial obligations in 1968 by extending the mortgage. Since 1969 will be a legislative year, there will then be a demand for at least an additional $20,000, which would mean either borrowing or selling the property. This we also can do. However, as a matter of sound business we believe the Society would be better advised to pay off the building as rapidly as possible and save the interest, hold the extra property until it has reached a higher level of value, and raise the dues $25.00 in 1969. We ask you to keep in mind that if the building loan is retired in 1972, which would be on the basis of the present rate, approximately $39,000 will be released for other purposes. As in the past, the Board of Trustees expects to provide an annual evaluation of the Society's entire fiscal situation, which permits a change in policy from year to year. We'd like to be in a position to assure the delegates that if the dues are increased in the amount recommended, a reduction could be seriously considered beginning in 1973. However, with the present inflated state of our economy, we would be fearful to go that far. As mentioned earlier, just the cost of doing business has increased an average of 8 per cent during the past several years. This may or may not change.

For comparative purposes we have provided an exhibit setting forth the dues of several neighboring states and the total income those dues represent in relation to the number of doctors in each state. We ask that as the delegates reflect on these figures they establish a mental picture of the levels of performance and activities of these various societies and contrast them to Iowa's.

Members of the Board of Trustees will be in attendance at the Reference Committee on Reports of Officers to provide more detailed information.

It is now my privilege to introduce Dr. Ralph Wicks, a trustee, who will present Section III of the Supplemental Report of the Board of Trustees, which relates to Blue Shield.

SECTION II—EXHIBIT B

COMPARATIVE DUES (NEIGHBORING STATES)

	1968 Dues	*Approximate Number of Dues Paying Members*	*Approximate Dues Income*
Illinois	$105.00	10,300	$1,081,500
Wisconsin	120.00	3,878	465,360
Minnesota	100.00	4,100	410,000
Indiana	80.00	4,312	344,960
Iowa	125.00	2,160	270,000
*Missouri	60.00	4,063	243,780
Nebraska	70.00	1,517	106,190
North Dakota	100.00	496	49,600
South Dakota	100.00	475	47,500

State with Highest Dues—Alaska—$200.00
State with Lowest Dues—Massachusetts—$35.00
* Dues Increase in 1969 to $70.00

SECTION III—BLUE SHIELD REPORT

Presented by Ralph L. Wicks, M.D., Trustee

(Referred to the Reference Committee on Blue Shield)

The Blue Shield Section of the Board of Trustees Report to the House of Delegates has become increasingly positive in nature, the past year or two. These recent annual reports have referred with satisfaction to the openness and cooperativeness which have characterized the relations between Blue Shield and the Iowa Medical Society. I am pleased to tell you, at the outset of this 1967-68 report, that this same spirit continues to manifest itself and may even have been heightened during the past 12 months. For this we are pleased; we believe that this kind of cooperative atmosphere enhances the ability of Blue Shield to serve its subscribers, and that it also strengthens the medical profession's ability to serve its patients.

The first order of business in this report will be that of bringing before you information on several contract changes which have been proposed by Blue Shield. You may recall the House of Delegates has requested Blue Shield to come to the Iowa Medical Society for guidance and approval "when new contracts are being considered; when changes or new interpretations of existing contracts are contemplated; when changes are proposed regarding the philosophy and technique of paying claims, and when information comes to light disclosing abuses of the Plan."

Blue Shield deserves to be commended for its cognizance of and compliance with this request. The suggested contract modifications to be summarized in this report have been reviewed by the chairman of the Committee on Medical Services and by the Board of Trustees, and have been approved in principle by the Executive Council. At its January 17, 1968, meeting, the Executive Council approved the following motion having to do with these proposals: "That in light of past recommendations of the House of Delegates and existing IMS policy, the Blue Shield contract proposals be approved in principle, with the understanding that (a) after the formal contracts have been developed, they will be provided to the IMS for further study and comment by an appropriate committee and/or Board of Trustees of the IMS, and (b) that a report on this matter will be presented to

the IMS House of Delegates in April for its information and comment."

The Society has been provided information on the proposed contract amendments on two occasions. Material in preliminary form was made available by Blue Shield in December. It was on that material that the preceding action of the Executive Council was based. More formal legal descriptions of the modifications were forwarded to the Society in February. That recent material was reviewed by the Board of Trustees on February 21, and the Board at that time reiterated its approval of the proposed modifications. A joint meeting of the Society's Board and the Executive Committee of the Blue Shield Board of Directors occurred on March 19, and at that time support was again given the proposals, with provision again made for the modifications to be presented to the House of Delegates for review.

Following then, in brief, are the contract modifications which Blue Shield proposes. Only one, that having to do with Extended Care Facility Coverage, has been implemented to date; the others are understood to be under consideration, with implementation contingent upon approval by the House of Delegates. Bear in mind the admonition which has been made by the House of Delegates in the past, namely, that the Blue Shield Board explore policy modifications which would discourage overusage of hospitals and would encourage outpatient and private-office practice for diagnosis and therapy. The efforts of Blue Shield to comply with this request are apparent in these proposed modifications.

1) *Home and Office Visits—Consultation—Usual and Customary.* As mentioned, in 1966 and 1967, the House of Delegates approved language which urged consideration of coverage for diagnostic and therapeutic services performed away from the hospital setting. Of the modifications which have been proposed by Blue Shield, this one carries out perhaps to the greatest extent this request of the House of Delegates. It is contemplated that initially this coverage will be provided only in group programs, and will be sold only as a rider to active contracts. Benefits under the program will be premised entirely on the usual and customary fee concept. Benefits will be paid for medical services rendered in the physician's office, in the patient's home, or in the outpatient department of a hospital. Benefits will be payable beginning on the first day on which a charge is incurred for the treatment of an accidental injury, and on a day to be determined for the care and treatment of any one illness.

2) *Extended Care Facility.* This coverage will be available only to those under age 65. It will enable the physician to use his professional discretion in arranging out-of-hospital convalescent care for patients. It will thus furnish a possible economic safety valve to relieve pressures on more costly acute-hospital care. Actuarial computations show the premium increase for this coverage to be almost nil; consequently, it is understood that it will be offered at no additional cost. In contrast to Medicare provisions, no prior hospitalization will be required for this coverage; an individual may be admitted from home or from the physician's office.

Physicians' visits in an ECF under this plan will be on the basis of one visit during each two days of inpatient care. One physician visit in an ECF will reduce accordingly the number of in-hospital medical visits provided in the basic contract. Under the Blue Shield Comprehensive contract the physician will be paid his usual and customary fee; for the "series" contracts, benefits will be payable at unit values. Radiology and pathology services performed by or under the supervision of a physician in a doctor's office, in the outpatient department of a hospital, or in the ECF will be provided under this proposal, if they are rendered to a member while an inpatient in an ECF.

As previously mentioned, this modification is understood to be the only one among those under discussion in this report which has been implemented thus far. This was done to permit a tie-in with a provision in a companion Blue Cross program.

3) *Diagnostic X-ray and Laboratory.* This proposal will provide benefits for x-ray examinations or laboratory services which are not included under the applicable basic program. To encourage outpatient service further, coverage will be authorized for the performance of these medical services in the office, in the home or in the hospital outpatient department, provided they are supervised or directed by a physician. There will be a maximum benefit level, to be elected by those structuring the group program.

4) *Physical Therapy.* Under this proposal Blue Shield will pay for physical therapy services rendered, supervised or directed by a physician, again in the office, home, or hospital outpatient department, when such services are provided for the treatment of an illness or injury. This coverage will be available only as an amendment to an existing contract.

5) *Vaccinations, Immunizations and Injections.* For those who elect it, this coverage will be appended to a regular Blue Shield contract and will pay for vaccinations and immunizations, including tetanus antitoxin, when medically indicated and so long as the vaccination or immunization is consistent with the condition for which the patient is being treated. As customary, this service must be rendered, supervised, or directed by a physician; it may be administered in the office, the home, or the hospital outpatient department. With the exception of those conditions requiring frequent or repetitive treatment, Blue Shield will pay for the administration of injectable medications, again when administered pursuant to the preceding conditions. This coverage, as is true of the preceding two, will be premised on the usual and customary fee concept.

6) *Medicare Complementary Coverage.* Thousands of older Iowans have enrolled in the Blue Shield complementary program which began in July, 1966. Many of them apparently have been confused about what coverage is provided, i.e., the extent to which deductibles are covered, the co-insurance provisions, etc. You may recall that the 1966 House of Delegates declared it understood "the need for complementary coverage" even though it noted the inherent danger in eliminating deductible and co-insurance features. This present Blue Shield Medicare Complementary Coverage serves better than 100,000 Iowans. Now under consideration by Blue Shield and understood to be still in the exploratory stages is a Master Complementary Coverage, which would be offered in addition to the existing Medicare Complementary program. This proposed Master Contract for Complementary Coverage would pay the deductible and co-insurance features of any professional service provided by Medicare. The cost of this Master Contract is esti-

mated at a little more than $8 a month, in contrast to the $5 monthly amount required for the present Medicare Complementary Coverage.

These, then, are the basic proposals which have been transmitted to the Society by Blue Shield in recent months; they have been endorsed in principle, as indicated, and they are provided to the House of Delegates for review at this time.

In further consideration of the total area of contract development and its relationship to the national market place and the need to meet competition, the Society has been apprised of Blue Shield's wish to blueprint a new kind of contract. This plan, which Blue Shield has begun to structure, has been designated Usual, Customary, and Reasonable (UCR). Under this plan the charges of *all* physicians would be paid on the basis of usual, customary, and reasonable fees. There would be no differentiation between those who do and those who do not participate in Blue Shield. The vital ingredient in this Usual, Customary, and Reasonable program is the medical profession's claims review system. If the review system is up to the challenge, the chances of success for this program seem bright. The responsibility for adjudicating those few, but important, claims which require more than internal administrative review must be accepted and carried out by local review committees and, when necessary, by a state claims review committee.

The appearance of the word "reasonable" in the program name implies an element of control with respect to the establishment of a maximum payment level. Guideline information for this use may be assembled from Blue Shield analyses of various geographical entities within the state. In this way it would be possible to devise reasonable charge levels, giving consideration to both practice location and to the level of care involved. In cases where a physician's customary charge exceeds the determined reasonable level of the UCR program and where the review process supports the UCR level, the concerned physician would be encouraged to reach an agreement with his patient in advance of providing the services. That agreement would allow the physician to bill the patient for the difference between the UCR allowance and his usual and customary fee.

The pressure of competition for major group accounts at the national level appears to make exploration of this approach most important. The success of the program, if it does evolve, will depend to a major extent on the ability of the profession to provide an effective claims-review system. The Society has advocated use of local claims review by all third parties; in fact, it has been adamant in its belief that any claim or charge made by a physician which cannot be resolved by a third party should be evaluated by a professional peer group, a body which is cognizant of local economics and circumstances.

The existing and flourishing Blue Shield Comprehensive Contract will not be superceded by this proposed UCR program. As you know, the Comprehensive Contract supplanted the now defunct Blue Chip Program. In its Comprehensive Program, Blue Shield has retained an element of control in the form of the participating agreement. The doctor whose charges exceed Blue Shield's determined ability to pay usually resigns as a participating physician. In these cases the payment of benefits is then made to the patient on the basis of a $5 unit value. This is in contrast to the participating physician who under the program receives his usual and customary charge directly from Blue Shield.

At the previously mentioned March 19 joint meeting of the Board of Trustees and Executive Committee of Blue Shield, this proposed UCR program was discussed at some length. Blue Shield was advised at that time to continue its development of a UCR contract for use with national accounts. It was understood that the Medical Society will be kept up to date on the progress in this area. It was further agreed that if this kind of program is implemented, the IMS and Blue Shield should study its record carefully and determine the feasibility of extending this type of coverage. It was additionally agreed that the long-standing Blue Shield provision for participating and non-participating physicians should receive broad study.

Turning to another subject, which happily is not applicable in Iowa at this time, it would be appropriate for me to mention the recent efforts of the Iowa Medical Society to overturn what was felt to be an unwise action taken by the National Association of Blue Shield Plans. In that action a change in the NABSP Bylaws was made which authorized the operation of a Blue Shield Plan under conditions which did not include approval by a sponsoring medical society. In lieu of such sponsorship, the change in the Bylaws granted operating status if the particular plan held participating agreements with a majority of the physicians actively practicing in the area served.

The Iowa Medical Society considered that action ill-advised, and it introduced a resolution at the Interim Meeting of the AMA House of Delegates, last November, calling upon the AMA to request the NABSP to re-study and rescind its action. The Iowa resolution was submitted in the belief that reversal of that ruling would be in the long-range best interests of organized medicine and Blue Shield.

The AMA Reference Committee which considered the Iowa Resolution concurred that this change in membership standards does introduce a major impediment to optimal relationships between medicine and Blue Shield. Pursuant to that concurrence, the AMA House of Delegates approved the Iowa Resolution and additionally created a joint committee with NABSP to study this matter and to assume responsibility for resolving disagreements between Blue Shield Plans and medical societies.

That AMA-NABSP Committee has met one time—in advance of the recent National Blue Shield meeting in San Francisco. The officers of the Society are concerned that no apparent steps were taken at that San Francisco meeting to restore the membership requirement concerning medical society sponsorship of Blue Shield Plans. The Board proposes to stay abreast of this matter.

Brief comment is appropriate in this report regarding the role of Blue Shield as Medicare Part B carrier for Iowa. Whereas a year ago the Medicare situation was bleak, in terms of claims processing, it is understood that Blue Shield has now reversed this position almost 180 degrees, thanks to a lot of good effort. Among the Blue Shield Part B Medicare carriers we understand that Iowa has ranked among the top 10 in recent months. Within the past several weeks the contract authorizing Blue Shield to serve as Part B carrier in Iowa has been renewed for another year.

A less favorable story exists with respect to Title

XIX or Medicaid. As with Medicare a year ago, the newness of the program and the overlapping involvement of several agencies have posed administrative problems which only now appear to be resolving themselves. Progress is being made, and Title XIX claims are being processed with increased dispatch. This is evident from a glimpse at the initial Monthly Statistical Report on Medical Care provided by the Department of Social Services. That report showed that $351,831 was paid to medical doctors under the program for the month of January. The total paid to all vendor groups in January amounted to $1,771,701.

At the outset of this report, reference was made to the spirit of cooperation now emerging between Blue Shield and the Iowa Medical Society. Let me conclude my comments by informing you of a further step in this direction. To serve the medical profession better, the two organizations have only recently approved the development of a joint field-service program. That plan will enable both organizations to provide better service to the physicians, and will allow increased staff assistance in the all-important area of claims review. It is anticipated that this program will be implemented within the near future.

With the permission of the House of Delegates, I should like at this time to introduce Mr. William Recknor, executive director of Blue Shield, for any comments he may wish to make.

SECTION III—EXHIBIT C

Presented by William B. Recknor, Executive Director
Iowa Medical Service

Thank you, Dr. Wicks.

My comments this morning will be brief. I wish merely to underscore the remarks made by Dr. Wicks regarding the cooperative spirit which now exists between the Iowa Medical Society and Blue Shield. I believe the harmony which has manifested itself over the past several years has worked, as Dr. Wicks has implied, in the best interest of the doctor as he serves his patients, as well as Blue Shield as it serves its subscribers.

One particular example of the close relationship now existing between our two organizations deserves comment. I refer to the arrangement which enabled Mr. Eldon Huston, assistant executive vice-president of the Society, to become part of the Blue Shield staff on virtually a full-time basis for a period of six months during this past year. Eldon helped us principally with Medicare matters; his knowledge and administrative ability were of significant value in remedying deficiencies and in shoring up our Medicare claims-handling system. We anticipate making further extensive use of Eldon's capabilities in the coordination of the field-service program to which Dr. Wicks referred.

A brief progress report may be in order on two subjects about which the House of Delegates has expressed an interest in the past year or two. The House requested Blue Shield to move all of its contracts in the direction of "comprehensive" or usual-and-customary-type coverage as quickly as possible. I am pleased to report that the number of subscribers covered by "comprehensive" contracts doubled in 1967 and now exceeds the 100,000 level. In contrast, the A"250" contract is all but extinct, and the "300" contract has been removed from the portfolios of our sales staff.

The second item has to do with a request from the House that efforts be made to improve the communications system between physicians and Blue Shield. For your information, a Physician Services Center has been established at Blue Shield and will be fully operative in the near future. All inquiries from physicians will be directed to it, and we anticipate having several well-qualified individuals stationed there to provide information promptly and accurately.

To Dr. Wicks' remarks regarding NABSP membership standards, I might add that we share the Iowa Medical Society's interest in recent developments, and we plan to offer our help in resolving that matter in the best interests of all concerned.

Let me conclude by mentioning that representatives of the Blue Shield Board will be present along with me, this afternoon, at the Blue Shield Reference Committee session, to supply whatever additional information may be requested.

Thank you.

(Resumption of report by Dr. Sunderbruch)

This completes the 1967-68 Supplemental Report of the Board of Trustees. Members of the Board will be available at the hearings of the reference committees to provide whatever additional information may be requested.

Thank you for your attention.

Dr. J. H. Sunderbruch, chairman of the Board, presented a check in the amount of $11,715.53 to Dr. Robert Hardin, dean of the College of Medicine, on behalf of the American Medical Association Education and Research Foundation. Dr. Hardin then spoke briefly, acknowledging the gift.

DR. ROBERT HARDIN

Dr. Sunderbruch, Mr. Speaker, Ladies and Gentlemen: This check is, as usual, very nice. As I have told you on other occasions like this, in these days money which is given freely for any purpose is extremely rare. I think those of us who try to support programs like ours from our own pockets sometimes become discouraged because of the gigantic programs of the federal government, but let me assure you that all voluntary, private-enterprise types of support are more valuable day by day, as the federal programs grow. They are more valuable each year because they offer a means of hanging onto some freedom. The check will be well used.

I should like to say a few words, though many of the things I had in mind have been said this morning. During the last couple of years I have talked to you about the necessity for the medical profession's taking the lead in planning for changes in the health-care delivery system, and you have heard about that from several speakers this morning. I think the Iowa Medical Society is to be congratulated for the leadership it is displaying. I know that in practice you are overloaded with patient responsibility; you are plagued by increased demands for service, and the fact that you somehow meet these and still have energy left over to take a position of leadership in health planning is remarkable and somewhat unique in this country. Not all states have this kind of leadership coming from the medical profession.

Our IMS president has talked about some of the other things I wanted to discuss, but I should like to

talk about some other changes that are taking place in the educational sector of the medical profession.

As you know, at Iowa we are trying to increase the number of professionals that we put out from all of our health-science schools. We talked about this before, and I shall just report briefly that the plans for enlarging the school—the new construction that we have to have—are going ahead very nicely at the present time. We shall break ground for the basic science building this summer. Our library campaign, of which you have heard and to which many of you have generously contributed, is going on extremely well, and we hope we may break ground for that building next summer—that is to say the summer of '69. We have plans for a dental school and a nursing school which are going along extremely well. Then the last one, which is behind the others but also is moving—is an addition to the hospital.

What I really want to talk to you about is the medical students. A couple of our students who are your guests, in the back of the room, won't listen to what I am going to say. You have heard or read in the papers of some ferment on the campuses of this country, not all of which is good. Unfortunately the things we hear about most are the things that aren't good. On each campus there is a small activist group, often led by what have come to be known as nonstudents—that is, hangers-on, professional agitators in some instances—who are trying to take the university into the political arena as a separate force. Fortunately that is a very small group, and the typical student on the university campus does not subscribe to the ideas of that small activist group.

I am happy to say that with few exceptions—individual exceptions throughout the country—medical students have held themselves separate from this type of activist cause. This is a very nasty problem in so far as the universities are concerned, and you can read in today's paper about the mess at Columbia. However, we do have to admit that there are activists among medical students—and this is the thing I really wanted to tell you about—that medical students are different from those that you and I were when we were medical students. They have lived in a different kind of world. They don't remember a time when this country was not at war. They have been subjected to the possibilities of draft all of their lives, and because they chose medicine, they will continue to be subjected to that possibility far beyond the years during which most young men are subjected to call.

At the present time, or in the last few years, half of our medical students have come from the upper 10 per cent of the families in this country, measured economically. This is changing, and we are seeing more and more students coming into all of our medical schools from the lower middle class and even the economically underprivileged sections of our economy. This will change some social attitudes in the medical profession eventually, and we have to remember this. Our students also are much more mobile than you and I were. They have gone around the country much more than we did. They have had television, which takes them every place. They have a better education than you and I had. They got in high school what we got in college, and they are now getting in college what you and I got in medical school.

Of all the entering medical students in the United States last year, 50 per cent had completed calculus and 30 per cent, believe it or not, had completed biochemistry. As a result there must be some changes in the medical schools themselves, and they will be good changes. If we are careful not to add to the years, I think, we can actually shorten medical school training. If I had my "druthers" today, I would shorten medical school to three years.

Among our students in this country, on almost every campus, we do have a group of activists, but they are different from the ones we read about in the paper. They are tremendously concerned about social problems. They don't want to talk to you about their concern, and they don't want to talk to me about it. They may talk to some of the younger faculty members, but our students, including the two in the back of the room who aren't listening, really don't want to talk at all to people over the age of 30. They don't like the world that we handed them. Their attitude is not unique. You and I didn't like the one our fathers gave us, though our students don't know it. Unlike us, they are concerned, and they are trying to do something about it.

Last Monday I visited one of the large medical schools in the East, which is situated on the side of an urban ghetto. Twenty-five per cent of the students in that school have formed a group that is trying to do something about the medical care of the people in that ghetto. They are activists, but theirs is a good kind of activism. Our own students, including the two in the back of the room—a small segment of the student body, not the whole of it—are interested in the same type of thing. They are interested in the problems of rural health-care delivery because they are in Iowa. They would be interested in the urban ghetto if they were in New York or Chicago. They are trying to do something about it. They want to do these things themselves, and they are trying. At the present time they are trying to learn about it, but they turn to us for help, and I am happy to say that we have a three-way parlay going here between the Iowa Medical Society and the Medical School and our student body, with the students taking the leadership.

Next week we will have a "happening" in Iowa City in which the University administration, the Medical Society and the medical faculty and the medical students will get together for a rather nice conference on this problem. I think you should be proud of them, and proud of the Medical Society and the members of the Medical Society who take time from their busy lives to help in this program.

What I am trying to say to you is that we have a different kind of medical student who is much more apt to be socially concerned than you and I were. He intends to do something about some of the problems. He is doing something about them, but he is doing it in a constructive way, unlike some of the students on our campus and other campuses who are really being destructive. I think we can be proud to have these young men who are coming into our profession.

INFORMATIONAL REPORT ON THE IOWA MEDICAL FOUNDATION

George H. Scanlon, M.D.

A bold declaration is sometimes used to introduce a report or speech. This is done to arrest the attention of the listener or reader. Here is an example of such a statement:

THE IOWA MEDICAL FOUNDATION EXPERIENCED, BETWEEN APRIL, 1967, AND APRIL, 1968, THE MOST ACTIVE 12 MONTHS IN ITS FIVE-YEAR EXISTENCE!!

Please let me take a few minutes to defend this statement.

In my 1967 report to the House of Delegates I took it upon myself to propose a fund-raising goal of $25,000 for the Foundation. The extent of that challenge becomes readily apparent when you bear in mind that the Foundation received $7,800 in support in 1966.

Through December 31, 1967, by contrast, the Foundation received nearly $17,000 in contributions. In addition the Foundation this year became the beneficiary of $24,000 worth of life insurance. This latter amount came about this year as a result of recent energy devoted to a program wherein interested Iowa physicians are invited to purchase life insurance and name the Iowa Medical Foundation as beneficiary. A nucleus of physicians have elected to participate in this program, and as a result, the Foundation has become the owner of insurance amounting to $24,000. Thus, for the past year, the financial activity of the Foundation reached the $41,000 level—a figure that I am pleased to report is well in excess of my announced goal of $25,000.

Much credit for this level of achievement is due several county medical societies. I refer to a small group of county societies that saw fit, this year, to make contributions to the Foundation. Their outright contributions ranged up to $3,000. Let me name and salute the county societies on this year's Iowa Medical Foundation Honor Roll: Pocahontas County Medical Society, Scott County Medical Society, Dallas-Guthrie County Medical Society and Appanoose County Medical Society. Also deserving of mention and praise with respect to this Honor Roll are the Wapello County and the Johnson County Medical Societies. Wapello this year entrusted $5,000 to the Foundation in the form of a loan, and Johnson lent $1,600. Incidentally, if that $6,600 were added to the previously mentioned total, the Foundation's financial activity would increase to $47,600 for the year.

Speaking for the Board of Directors, I should like to express sincere appreciation to those county societies for their tangible demonstrations of confidence in the Foundation. I should like to invite all county societies to consider similar contributions to the Foundation on a periodic or regular basis.

This past year the Foundation moved past the $300,000 mark with its medical student loan program. Concluding 15 years of activity in this important area in 1967, the Foundation and its predecessor, the Iowa State Medical Society Education Loan Fund, have now loaned $307,748.42 to Iowans aspiring to become doctors. There have been 217 loan recipients since 1952, and of those, 108 have repaid their obligations in full. The amount of money repaid as of April 15, 1968 totalled $161,248.22, leaving an outstanding balance in the Foundation loan fund of $146,500.20.

Recipients of Iowa Medical Foundation medical student loans, as noted in the preceding summary, now exceed 200 in number. In an informal study made last fall of 197 of the Foundation loan recipients, it was found that better than 80 of them are residing in Iowa. While it may be presumptuous to do so, it is nonetheless tempting to attribute the presence of these doctors in Iowa at least in part to the assistance provided them by the Foundation.

May I encourage you to mention the Foundation's medical student loan efforts when you encounter individuals who are critical of the profession for not exerting greater effort to increase its ranks. The record of the Foundation is truly positive. It can be useful in countering ill-founded allegations.

Let me comment now on an innovation in the Foundation's student loan program, conceived this year as a further means of trying to attract physicians for the State of Iowa. That modification was ratified by the Society's Executive Council in January, and I am pleased to report that several medical students have already indicated an interest in it.

Under this new program, the Foundation will be empowered to make loans of up to $2,000 to medical students at the sophomore level who will agree to enter general practice in Iowa for a period of three years. The loans will be renewable for the junior and senior years. It is the impression of several of us who have been associated with the Foundation for a number of years that this general-practice provision will fulfill the wishes of several past donors to the Foundation in a very real way.

It is felt that this innovation in the Foundation loan program will supplement effectively the state's new tuition-only loan program. The 1967 Iowa General Assembly appropriated $200,000 for tuition loans to medical and osteopathic students who agree to practice in the state. Representatives of the Foundation have met with officials of the Higher Education Facilities Commission to advise with respect to the implementation of this state program. The significant and appealing provision of the state program is the forgiveness feature, which serves to reduce and eventually erase the loan in return for service in Iowa as a general practitioner.

As mentioned, the state program is limited by statute to tuition only; thus its attractiveness for Iowa residents attending the College of Medicine is correspondingly limited, since the tuition at Iowa is only $570. That amount is obviously secondary to the cost of living, particularly for the medical student with a family. It is at this point that the new programs of the Foundation and the state may be made to work in concert to serve the same deserving medical student. It should be stressed, however, that there will be no forgiveness aspect to the Foundation's program. The inducement will be loan availability at the sophomore level, plus the generous $2,000 amount. The interest rate for the Foundation loans will be the same as it has been—five per cent, beginning when the borrower has begun licensed practice. Recipients who may elect to terminate their agreements with Foundation under this program will be required to pay off their total loan with a seven per cent interest charge.

Foundation loans will continue to be available to qualified junior and senior students, as has been the custom and as resources are available. It is fair to say however that priority will probably be given the new program.

We have been in communication with Dean Hardin and his associates about this innovation in the Foundation's loan program, and as mentioned, we have already had some expressions of interest from students.

Let me mention briefly the other ongoing activities

of the Foundation: (1) Participation as a sponsor in the recent and successful tenth anniversary Hawkeye Science Fair; (2) Participation in the 1968 IMS annual meeting as sponsor of The Baldridge-Beye Memorial Lecture to be presented Monday at 2:00 p.m.; (3) Participation in the 1968 annual meeting also as an exhibitor with a display designed to give its viewers an impression of the changing patterns in Iowa physician distribution over the past 20 years; (4) Participation as an exhibitor at the annual "Hall of Health" public education project at the Iowa State Fair, and (5) Participation through the generosity of The Prouty Company of Des Moines in the support of the Iowa Chapter of the Student American Medical Association. A $500 sum provided the Foundation by The Prouty Company is given to the Iowa Chapter to help meet expenses in sending representatives to national SAMA meetings.

I am still most anxious for all Iowa doctors to know of, to understand and to support the program of the Foundation. I call on those of you gathered here, who represent the leadership in Iowa medicine, to tell the Foundation's story to your colleagues.

Accompanying this report is a financial summary of the Foundation, as well as a statistical review of the Foundation's medical student loan program.

Let me conclude this report now by carrying on the tradition established quite a few years back, that of introducing to you two of the fine young men and women now enrolled in the University of Iowa College of Medicine. May I present to the 1968 House of Delegates Mr. Larry G. Rigler and Mr. Thomas A. Hicklin.

Thank you.

IOWA MEDICAL FOUNDATION

Summary of Student Loan Program

Total loans entered into since inception of program	$307,748.42
Loans repaid	161,248.22
Loans outstanding as of April 15, 1968	146,500.20
Number of students who have participated	217
Number of loans paid in full	108
Number of loans outstanding	109

IOWA MEDICAL FOUNDATION
BALANCE SHEET—DECEMBER 31, 1967

ASSETS:		
Central National Bank & Trust Company	$ 36,873.47	
Iowa State Bank & Trust Company	20,179.96	
Notes Receivable from Medical Students	140,436.21	
Student Nurse Loan Fund	3,701.63	
100 Shares of American Scientific Corp.	60.00	
		$201,251.27
LIABILITIES AND NET WORTH:		
Notes Payable to Physicians		$ 43,905.84
Net Worth:		
Balance 1-1-67	$148,921.65	
Add 1967 Gain	8,423.78	$157,345.43
Total Liabilities and Net Worth		$201,251.27

IOWA MEDICAL FOUNDATION

Income and Expense Statement—December 31, 1967

INCOME:		
Contributions and Memorials		$1,740.74
Henry Albert Trust		5,500.00
Interest on Loans		4,618.65
Special Gifts:		
The Prouty Company	$ 500.00	
Scott County Medical Society	1,000.00	
Pocahontas County Medical Society	3,000.00	
Dallas-Guthrie County Medical Society	408.78	
Appanoose County Medical Society	100.00	5,008.78
		$16,868.17
EXPENSES:		
Administrative Expense (Iowa State Bank & Trust)	$ 300.00	
Hawkeye Science Fair	3,500.00	
Health Planning Council of Iowa	550.00	
Interest Paid to Physicians	1,492.83	
Iowa Chapter, Student AMA (Prouty Grant)	500.00	
IMF Baldridge-Beye Lecture (IMS Annual Meeting)	382.56	
IMF Special Community Lecture	149.26	
Iowa State Fair Exhibit	365.04	
Legal Services	535.00	
Office Equipment (Desk & Chair)	280.50	
Office Supplies	163.53	
Tax Return	50.00	
Travel and Meeting Expense	175.67	
		8,444.39
Net Gain for 1967		$ 8,423.78

Supplemental Reports of Standing Committees

NOMINATING COMMITTEE

The Nominating Committee of the Iowa Medical Society met on Sunday, March 24, and agreed upon the following slate to be presented to the House of Delegates today.

President-Elect	W. M. Krigsten, M.D., Sioux City
Vice President	J. F. Paulson, M.D., Mason City
Speaker, House of Delegates	P. M. Kersten, M.D., Fort Dodge
Vice Speaker, House of Delegates	C. J. Smith, M.D., Gilmore City L. D. Caraway, M.D., Monticello
Trustee	K. E. Lister, M.D., Ottumwa
Delegate to AMA (2 year term) (Two to be elected)	L. W. Swanson, M.D., Mason City H. J. Smith, M.D., Des Moines
Councilor, 2nd District (3 year term)	H. G. Marinos, M.D., Mason City
Councilor, 5th District (To complete an unexpired term—term to expire at Annual meeting 1969)	C. A. Trueblood, M.D., Indianola
Councilor, 7th District (3 year term)	L. D. Caraway, M.D., Monticello
Councilor, 8th District (3 year term)	J. F. Bishop, M.D., Davenport
Councilor, 9th District (3 year term)	E. A. Larsen, M.D., Centerville
Blue Shield Liaison Delegates to IMS (Two to be elected)	C. L. Kelly, Jr., M.D., Charles City J. M. Rhodes, M.D., Pocahontas S. P. Leinbach, M.D., Belmond J. J. Redmond, M.D., Cedar Rapids

Additional nominations may be accepted from the floor, after which the speaker of the House of Delegates will declare nominations closed.

The Articles of Incorporation and By-Laws require that for candidates to be unopposed for nomination they must be unanimously approved by the Nominating Committee. Although it is recognized that it is desirable to have two candidates as a minimum for each of the proposed offices, the Nominating Committee is submitting but one candidate for each office except one, since these were the only names formally proposed to the Nominating Committee and were unanimously approved by the Nominating Committee.

It will be noted that there are four candidates for the two offices of Blue Shield Liaison Delegate to the Iowa Medical Society. Under the Articles of Incorporation and By-Laws of the Iowa Medical Society, the Liaison Committee shall submit to the Nominating

Committee the names of four or more candidates for the two positions of Liaison Delegate. Therefore, under the IMS By-Laws, it is mandatory that four or more names be submitted to the Nominating Committee for these offices. These names are merely received by the Nominating Committee and submitted as a part of its report to the House of Delegates.

Respectfully submitted,
J. F. BISHOP, M.D., *Chairman*
H. S. JACOBI, M.D.
B. H. OSTEN, M.D.
R. L. ZOUTENDAM, M.D.
P. M. CMEYLA, M.D.
E. E. LINDER, M.D.
C. D. ELLYSON, M.D.
J. E. TYRRELL, M.D.
F. O. VOIGT, M.D.
R. W. BOULDEN, M.D.
J. W. BARNES, M.D.

After reading the Nominating Committee's report to the House, Dr. Bishop announced that Dr. J. J. Redmond had indicated his wish to withdraw as a nominee for a position as Blue Shield liaison delegate, and that there had been insufficient time for the Committee to propose a substitute nominee.

Nominations from the floor were requested. C. E. Radcliffe, M.D., was nominated for the office of president-elect, but prior to the seconding of that nomination, Dr. Radcliffe asked that his name be withdrawn. Nominations were then closed, and nomination speeches were presented.

The report of the Nominating Committee was adopted as presented.

At the invitation of Dr. J. H. Kelley, chairman of the Committee on Legislation, Dr. Otis D. Wolfe reported on the work of the Iowa Medical Political Action Committee.

SUBCOMMITTEE ON MEDICAL EXAMINER LAW

(Referred to the Reference Committee on Legislation and Medical Service.)

Recently the IMS president, with the concurrence of the Board of Trustees, appointed a special subcommittee of the Committee on Legislation to consider possible modifications and/or improvements in the Iowa County Medical Examiner Law. The Subcommittee has held an organizational meeting and has reviewed material available to it relating to the possible creation of a state crime and forensic-toxicology laboratory, and the appointment of a state medical examiner.

The Subcommittee is attempting to arrange a meeting with various other state groups, both public and private, to discuss this entire subject in greater detail. The Subcommittee is aware that the Iowa State Department of Health, the State Department of Public Safety, the Iowa Crime Commission and the State University of Iowa College of Medicine have all devoted some attention to the subject of a state laboratory and a state examiner. Attempts are being made to bring these groups together at an early date to coordinate their thinking in this area and to arrange future meetings to consider the advisability of appropriate legislation relating to the medical examiner law.

The Subcommittee will maintain close liaison with the IMS Committee on Legislation, and if any recommendations for action are developed, they will be reported to the appropriate policy-making bodies of the Iowa Medical Society.

This report is submitted as a status and progress report only, and no action is necessary.

Respectfully submitted,
G. R. CLARK, M.D., *Chairman*
JOSEPH SONG, M.D.
E. E. GAMET, M.D.
J. B. DRESSLER, M.D.
G. R. ZIMMERMAN, M.D.

COMMITTEE ON HEALTH EDUCATION

(Referred to the Reference Committee on Miscellaneous Business.)

On April 17, the Committee on Health Education submitted to the Iowa Medical Society's Executive Council a policy statement on Sex Education in the Schools which had been developed in cooperation with the State Department of Health, on recommendation of the Committee. The statement was approved as follows:

"It is considered that sex education should be included in and be a definite part of the health education curriculum of the schools in Iowa. The basic material thus included should be scientifically accurate. The State Department of Public Instruction, the State Department of Health, and the Iowa Medical Society can provide assistance in the development of such materials.

"It is considered that sex education is the responsibility both of the schools and of the parents. In the schools and as part of the curricula, this subject is best taught by the classroom teacher and integrated into appropriate courses, with special counseling as needed. The extent and type of material presented should be integrated with other course material according to the maturation levels of the children. This teaching should be started in kindergarten and followed throughout the primary and secondary school levels. At all levels, students should receive honest, factual answers to their questions, whether these answers are provided by teachers or parents.

"For the satisfactory implementation of this policy, teachers at all levels should receive appropriate instruction in the necessary basic principles of anatomy, physiology and responsible interpersonal relations. Subject to the approval of local county medical societies, physicians may be called upon to consult with both teachers and students to assure the implementation of a sound program in sex education."

The statement will be released to schools, Parent Teacher Associations, and, upon request, to other agencies and individuals.

It should be noted that official action has not been taken by the State Department of Public Instruction in reference to the statement, and if it elects not to participate, the name of the Department will be deleted from the statement.

As was stated in the report which appears in the HANDBOOK, the Health Education Committee plans to distribute to county medical societies a set of guidelines concerning implementation of selected health education programs. In addition, the Committee will study ways and means to stimulate increased emphasis on health education curricula in schools and colleges,

as well as to focus attention on the need for qualified health educators.

Respectfully submitted,
C. D. ELLYSON, M.D., *Chairman*
I. J. HANSSMANN, M.D.
L. J. KIRKHAM, M.D.
G. M. KUEHN, M.D.
J. E. TYRRELL, M.D.
N. J. ELMER, M.D.

SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

(Referred to the Reference Committee on Legislation and Medical Service.)

In the HANDBOOK Report of the Subcommittee on Maternal and Child Health considerable attention is given to two subjects: (1) therapeutic abortion, and (2) immunization. It is the purpose of this supplemental report to elaborate further on these subjects, and in the case of the first, to reiterate the recommendations of the Subcommittee.

(1) *Therapeutic Abortion.* The extent of the Subcommittee's study of this subject is set out in the HANDBOOK report. It included (1) a review of IMS policy, (2) consideration of the 1967-approved AMA Statement on Therapeutic Abortion, and (3) an evaluation of recently enacted laws in North Carolina, Colorado and California.

Based on this study, and as stated in the HANDBOOK Report, the Subcommittee recommends the Iowa Medical Society endorse the AMA Statement of Policy on Therapeutic Abortion.

This Statement was approved by the 1967 AMA House of Delegates and reads as follows:

"The American Medical Association is cognizant of the fact that there is no consensus among physicians regarding the medical indications for therapeutic abortion. However, the majority of physicians believe that, in the light of recent advances in scientific medical knowledge, there may be substantial medical evidence brought forth in the evaluation of an occasional obstetric patient which would warrant the institution of therapeutic abortion either to safeguard the health or life of the patient, or to prevent the birth of a severely crippled, deformed or abnormal infant.

"Under these special circumstances, it is consistent with the policy of the American Medical Association for a licensed physician, in a hospital accredited by the Joint Commission on Accreditation of Hospitals, and in consultation with two other physicians chosen because of their recognized professional competence who have examined the patient and have concurred in writing, to be permitted to prescribe and administer treatment for his patient commensurate with sound medical judgment and currently established scientific knowledge. Prior to the institution of a therapeutic abortion, the patient and her family should be fully advised of the medical implications and the possible untoward emotional and physical sequelae of the procedure.

"In view of the above, and recognizing that there are many physicians who on moral or religious grounds oppose therapeutic abortion under any circumstances, the American Medical Association is opposed to induced abortion except when:

(1) There is documented medical evidence that continuance of the pregnancy may threaten the health or life of the mother, or
(2) There is documented medical evidence that the infant may be born with incapacitating physical deformity or mental deficiency, or
(3) There is documented medical evidence that continuance of a pregnancy, resulting from legally established statutory or forcible rape or incest may constitute a threat to the mental or physical health of the patient;
(4) Two other physicians chosen because of their recognized professional competence have examined the patient and have concurred in writing; and
(5) The procedure is performed in a hospital accredited by the Joint Commission on Accreditation of Hospitals.

"It is to be considered consistent with the principles of ethics of the American Medical Association for physicians to provide medical information to State Legislatures in their consideration of revision and/or the development of new legislation regarding therapeutic abortion."

In addition to recommending endorsement of the AMA Statement, the Subcommittee is unanimous in its belief that the Society should support a liberalization of the existing state abortion laws.

Specifically, the Subcommittee recommends that, with the advice of the Subcommittee and the Committee on Legislation, a bill be prepared and sponsored by the Iowa Medical Society on the general subject of therapeutic abortion in accordance with the following guidelines:

1. The bill should repeal or modify existing provisions of Iowa law where this is indicated and should contain appropriate provisions as to the crimes of abortion, attempted abortion, and distribution of abortifacients.
2. The bill would legalize the termination of a pregnancy only when:
 (a) The procedure is requested by the patient (with suitable provisions for obtaining such voluntary request in the case of patients who are under legal disability); and
 (b) There is documented medical evidence that continuance of the pregnancy may threaten the mental or physical health or life of the mother; or
 (c) There is documented medical evidence that the infant may be born with incapacitating physical deformity or mental deficiency; or
 (d) There is documented medical evidence that continuance of a pregnancy, resulting from legally established or reported statutory or forcible rape or incest may constitute a threat to the mental or physical health of the patient; and
 (e) Two other physicians, chosen because of their recognized professional competence (both of whom should be psychiatrists in cases involving mental health), have examined the patient and concurred in writing; and
 (f) The procedure is performed by a licensed physician and surgeon in a hospital accredited by the Joint Commission on Accreditation of Hospitals.
3. The bill should expressly provide that the refusal of any hospital, physician, or person employed by a hospital, to participate in the medical procedures which result in the termination of a pregnancy shall not form the basis for any disciplinary action or

recrimination against such hospital, physician, or person.

As mentioned, the foregoing three items are intended, if approved by the House of Delegates, to provide guidance to the Committee on Legislation in developing and supporting legislation to amend or repeal existing Iowa law having to do with abortion. As also implied previously, the Subcommittee is prepared to continue to offer its advice and counsel during the legislative process.

(2) *Immunization.* The position of the Subcommittee on the matter of immunization is included in the HANDBOOK report. The Subcommittee strongly advocates pre-school administration of the now-accepted immunizations, as well as others which may be approved by the American Academy of Pediatrics. The Subcommittee believes the Society should support as fully as possible those voluntary public education programs on immunization which are implemented at the local or community level. But the Subcommittee feels the Society should not encourage compulsory immunization legislation at this time.

Recent newspaper articles on the subject of mass measles immunization clinics have been critical of the medical profession for a purported lack of cooperation in these mass programs. Subsequent to the initial news story which quoted a representative of the State Department of Health, the position of the Iowa Medical Society was set forth in a public statement issued by its president. That statement was provided to members of the Subcommittee and was included in an IMS NEWS BULLETIN distributed to all members of the Society.

That statement called attention (1) to approval given by the 1967 IMS House of Delegates to a "Statement of Policy Concerning Circumstances of Immunization Administration," developed by the State Department of Health; (2) to the endorsement by the IMS of county measles vaccination programs when those programs are approved and supervised by the involved county medical societies; (3) to the understanding of the Subcommittee and the Society that progress toward the eradication of measles in the past 12 months has been significant, and (4) to the willingness of the Society and the Subcommittee to offer advice and counsel to the State Department of Health on this subject.

The Subcommittee concurs with the concluding comment in this public statement issued by the president, and it urges the House of Delegates to re-declare its belief in this philosophy. The comment is as follows: "The Society still holds to its belief however that because of circumstances which may be unique in a particular county, a county medical society should retain the right to endorse any mass immunization program."

Respectfully submitted,
W. J. BALZER, M.D., *Chairman*
MADELENE M. DONNELLY, M.D.
CHARLOTTE FISK, M.D.
A. L. JENSEN, M.D.
J. C. MACQUEEN, M.D.
D. O. NEWLAND, M.D.
C. P. PHILLIPS, M.D.
J. M. WALL, M.D.
C. A. WATERBURY, JR., M.D.
J. J. WEYER, M.D.

SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES

(Referred to the Reference Committee on Legislation and Medical Service.)

A summary of the 1967-68 activities of the Subcommittee appears in the HANDBOOK FOR THE HOUSE OF DELEGATES. Principal attention was given, in the HANDBOOK report, to the efforts of the Subcommittee to carry out the task assigned to it by the 1967 House of Delegates. This assignment was that of developing and distributing a patient-eligibility guide for recommended use by the state's mental health clinics. After several meetings, the Subcommittee concluded that this assignment might best be accomplished by further revising the IMS Standards for Mental Health Clinics. In July, the IMS Executive Council approved the Subcommittee's recommended revisions, and the Revised Standards have now been promulgated as requested. For further information on this matter, the delegates are referred to the HANDBOOK.

It is for the purpose of reporting on the actions taken at a March 6 meeting that this Supplemental Report is provided.

The attention of the House is directed to the following three items. They are submitted as recommendations in the hope that House approval or endorsement will be forthcoming.

1. Public Law 88-164 provides federal aid to the states for the construction of comprehensive community mental health centers. Plans for the development of several of these centers in Iowa are now in process. It is the desire of the Subcommittee to undertake an in-depth study of the problems manifest in the development in Iowa of the community mental health centers. The Subcommittee proposes to evaluate the relationship between this kind of facility and the private practice of medicine, especially as it pertains to in-patient care. It is contemplated that the study will involve a review of the Iowa Comprehensive Mental Health Plan, including an assessment of the extent to which the Plan has been implemented since its completion several years ago. The Subcommittee asks the endorsement of the House of Delegates for this proposed study.

2. In connection with its study of community mental health center development, the Subcommittee proposes also, in the year 1968-69, to evaluate trends in insurance coverage for psychiatric care. It is anticipated that this effort may involve to some degree the expertise of representatives of the Iowa Psychiatric Society. As before, the Subcommittee requests an indication of encouragement from the House of Delegates regarding this proposal.

3. The Subcommittee has followed psychiatric care trends in Iowa with considerable interest for many years. The development and periodic up-dating of the IMS Standards for Mental Health Clinics by the Subcommittee is evidence of the effort which has been exerted to influence quality mental health care in Iowa. Considerable reliance has been placed on the Standards by various of the state's mental health clinics. Trends in Iowa now suggest to the Subcommittee the need for an IMS Position Statement commenting on the direction in which mental health care should be moving in the months and years ahead. The following Position Statement has been prepared by the

Subcommittee for consideration and possible adoption by the House of Delegates.

POSITION STATEMENT PROPOSED BY THE SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES

Purpose:

The Subcommittee on Nervous and Mental Diseases of the Iowa Medical Society has become increasingly concerned over trends in the medical care of psychiatric patients in the state. It is hoped that a thoughtful statement on needs and directions for the medical care of these people may be helpful, to the end that all patients may receive the best possible care.

Historical Perspective:

I. Local Responsibility in Iowa

The pattern which has evolved in Iowa over the years has been one wherein care for the indigent mentally ill has been funded at the local governmental level, usually the county. This local administration has included the handling of arrangements for the care and the payment of full costs. When possible, partial collection of these payments from the family has been attempted by the county unit of government. In this manner the local unit of government has assumed primary responsibility in securing care for those unable to provide for themselves. Most other states have had a state-level service for the care of the mentally ill.

II. Recent National Trends

The pattern now existing in Iowa—that of providing care to the mentally ill at the local level—appears to have achieved considerable acceptance at the national level. This is reflected in federal legislation, in studies by the American Medical Association and the American Psychiatric Association, and in the work of the Mental Health Association. Underscored throughout this national commentary is the importance of psychiatric care returning to the mainstream of medicine. Iowa appears to have preceded the nation in its thinking and has a head start in making mental health care a local, rather than a state responsibility.

III. Recent Legislation in Various States

State support of local clinics is a common practice. Care of indigent mental patients at the local level is now being partially reimbursed from many state coffers; this reimbursement ranges anywhere from 20 to 75 per cent. In Iowa, in contrast, the local community has carried the total financial responsibility. Many states that have had more total state responsibility and control are moving toward more local responsibility. In Iowa, however, and again in contrast, there is an observable trend toward increased state control and responsibility. Recent Iowa legislation provides for payment from state funds of 20 per cent of the cost of hospitalization in a state mental health institute. As mentioned, this will increase the state participation, and control and diminish the element of community level responsibility.

Present Problems and Recommendations:

I. Problems of Increased State Support

Recent legislation provides state support to patients in state hospitals, this to the extent of 20 per cent of the cost. There has been some interest in devising an arrangement under which the county would pay the full 100 per cent cost, but 20 per cent of this cost would be channeled back from the state to the county for its use. However, under this arrangement the state would return the money with explicit instructions as to the purpose for which it might be used.

The Subcommittee advocates restoration of that approach which places total responsibility for providing mental health care at the local level. In this way the people at the community level assume responsibility for arranging the best and most economical means of providing care. Determination is made at this point as to whether care is required partly or entirely through state facilities or through local facilities. This approach would serve to encourage support and development of local psychiatric offices, psychiatric sections in general hospitals and special clinics. Most authorities agree these are the most desirable sources of care and their existence in reasonable proximity allows for a maximum coordination of care. No special money from the state treasury is needed for care in the psychiatric area. Such action would tend to limit the flexibility which communities have in tailoring programs to meet their own specific needs.

II. The Role of the Mental Health Authority

There is some interest in merging all psychiatric care (or mental health care) under one state agency. The state hospitals are under the control of the new State Department of Social Services through the Director of Mental Health of State Institutions. In addition, the State Mental Health Authority functions to provide consultation and educational services to the local mental health clinics.

The Subcommittee recommends the Mental Health Authority be maintained along with its Mental Hygiene Committee. The Subcommittee regards as important the educative and consultative services which the MHA provides to the local mental health clinics and to private medical practitioners of all specialties. It is felt that when control is at the community level there is a much greater likelihood that the unique needs of the community will be met. It is also felt that this kind of approach will permit better coordination among the various facilities and practitioners located in or near a community. For instance, one community may arrange for hospitalization outside its corporate limits because of insufficient facilities. Another community might care for all but the very specialized needs of its mentally ill. This localized approach will heighten the important element of teamwork between the responsible members of the county and city governments, the county medical society and interested lay groups.

III. Means of Assuring High-Quality Care

The principal objective in all of these approaches is obviously the highest quality care possible whether it be in the doctor's office, the community hospital or in a specialized setting outside the community. There is today very little disparity in Iowa in the quality of care available to patients of different socio-economic levels.

The Subcommittee favors the continued expansion of voluntary health insurance, especially catastrophic coverage in the psychiatric area. This provision will enable the low-middle income individual or family to obtain the best possible care without severe financial

hardship. We also advise the cautious expansion, improvement and re-evaluation of Title XIX (Medicaid). This program provides close-to-home, high-quality care for those of minimal income.

Respectfully submitted,
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SUBCOMMITTEE ON PUBLIC ASSISTANCE

(Referred to the Reference Committee on Legislation and Medical Service.)

This supplemental report will summarize for the House of Delegates matters discussed at an April 23 meeting between representatives of the Subcommittee and the State Department of Social Services.

Please note the opening reference to Department of Social Services. This new component of state government was authorized by the 1967 Iowa General Assembly as an outgrowth of an extensive re-organization study. The new Department gathers into one governmental entity the Board of Social Welfare, the Department of Social Welfare, the Board of Control, and the Board of Parole.

The Subcommittee was informed on April 23 that the next few months will constitute a period of transition, with the new organization phasing in and the existing boards phasing out. The Boards of Social Welfare and Control expect to remain active until July 1, 1968, at which time they will be disbanded. Under the new law the Department of Social Services is to be headed by a commissioner appointed by the governor. Mr. Maurice Harmon, previously a public official in Kentucky, assumed this position on February 15. Five divisions are now included in the new Department: Child and Family Services; Mental Health; Corrections; Planning, Research and Statistics, and Administration.

It was reported to the Subcommittee that an advisory committee consisting of five lay persons has recently been appointed to advise the new commissioner. Provision for such an advisory group was included in the reorganization legislation. That committee, which has some policy-making powers, will function on a part-time basis, in contrast to the full-time Board of Social Welfare, which is now being phased out. The county departments of social welfare are apparently little affected by the reorganization that is occurring at the state level. That was the impression conveyed by the social services representatives present at the April 23 meeting.

The Subcommittee was pleased to meet with Dr. Otto Glesne in his new role as director of medical services for the State Department of Social Services. In an earlier report prepared for the House of Delegates HANDBOOK, it was pointed out that the Subcommittee had urged the Society to assist as possible in finding a successor to Dr. Elmer M. Smith who had, as Dr. Smith did, an intimate understanding of the private practice of medicine in the state. The selection of Dr. Glesne for this position is an excellent one, and the Subcommittee looks forward to working with him, as it did with Dr. Smith. Representatives of the Department of Social Services indicated their pleasure at having Dr. Glesne as a member of the staff.

The bulk of the April 23 meeting was devoted to an assessment of the Medical Assistance or Title XIX Program in Iowa after nine months of operation.

The state officials reported that to the best of their knowledge the Iowa Title XIX program has been reasonably well accepted during its short period of existence. The backlog of claims and the payment time lag have provoked some critical comment, the Social Services representatives acknowledged. They suggested that any new program of this magnitude is certain to experience problems during its early stages. The involvement of three separate agencies in the administrative process has added to the complexity and has increased the need for cooperation. Involved are the Department of Social Services, the State Comptroller's Office, and Blue Cross/Blue Shield as carrier. Meetings of personnel from those three bodies have been held frequently during the past year, and the efforts to iron out eligibility-determination and claims-handling problems are now beginning to bear fruit.

The Subcommittee was informed that a private accounting firm has recently been employed to make a review of the Title XIX administrative procedures. Its independent survey is to include all of the Title XIX administrative components, and it is now in process. It will cover a period of eight weeks. It was reported that the accounting firm has already made suggestions which have proved valuable.

The Social Services officials willingly accepted responsibility for some of the problems which have brought about delays in claims handling. They indicated additionally, however, that some of the responsibility rests with the providers of service. To improve matters, they are urging the providers to look at the Title XIX patient's eligibility card each time a service is provided and to enter the patient's card number on the claim. They point out that an individual eligibility number is subject to change, and thus physicians would be well advised to have their office help scrutinize identification cards of all Title XIX patients on a regular basis.

It was reported by the Social Services personnel that relatively few inaccurate bills are coming from physicians. It was suggested the doctors' previous handling of Blue Shield, Medicare and other claim forms may have better equipped them to cope with the Title XIX program.

Reference was made to the timetable for expanding Title XIX in Iowa. It was recalled that federal requirements necessitate adding certain medically-indigent groups, so that all groups will be included by 1975. According to the state officials, the original go-slow plan has not been altered. This schedule called for: 1) Money payment recipients (OAA, AB, ADC, and AD) and categorically-related medical indigents—1967; 2) Medical indigent children under 21—1969; 3) Persons over 65 in mental health institutions—1971; and 4) Other medically-indigent persons between 21 and

64—1975. Items 2, 3, and 4, it was observed, are subject to change, depending on appropriations and other factors.

Because of the backlog of Title XIX claims, the state officials were reluctant to relate the amount of money expended to date to the total appropriation. They implied that the spending was in line with the appropriation. Information was made available to the Subcommittee which showed that $9,643,219.58 had been paid out under Title XIX in Iowa up to April 10. The number of cases shown during that period was 410,576. Figures for the month of February were used to illustrate for the Subcommittee the relationship of doctors to all Title XIX vendors. The total paid to all vendors in February was $1,715,700.45. The amount paid to medical doctors for that period was $342,347.79. It was pointed out that physicians are presenting about one-third of the claims and are receiving about 20 per cent of the total amount paid.

The matter of organ transplants was raised by the Social Services representatives, and the comments of the Subcommittee were invited. Concern was expressed over the potentially large amount of tax money which may be called on to pay for these expensive medical procedures, all of which, to date, have been performed outside the state. An illustration was given of a kidney transplant in which the cost of care was noted as $26,000. The state officials have discovered from an informal survey that other states are in a quandary as to how to handle the high cost of this kind of service for the medically-indigent. It was acknowledged that most people usually have some kind of insurance coverage to provide for at least a portion of major costs incurred in these instances.

Those present from the Subcommittee were requested by the state officials to reflect on this subject so that it could be discussed in greater detail in the future.

The changes in the Title XIX program resulting from the Social Security Amendments of 1967 were discussed briefly. Information on these amendments is still meager, making difficult any discussion of the potential impact of the changes. Reference was made to a new provision which calls for a utilization committee to review Title XIX patients in Extended Care Facilities or Skilled Nursing Homes. The Subcommittee offered to advise the Department of Social Services as it attempts to comply with this federal requirement. It was felt that if at all possible it would be desirable to have this function performed by an existing committee, rather than to attempt to constitute a new one. It was agreed this subject and others relating to recent Title XIX amendments should be discussed further when the federal regulations become available.

It was reported to the Subcommittee that Title XIX payments will be authorized to physical therapists in the near future. It was emphasized by the Subcommittee that although they are licensed, these therapists must provide treatment only on the prescription and under the supervision of a physician.

The handling of pharmaceuticals under Title XIX was reviewed briefly at the April 23 meeting. Ways of including certain non-legend drugs as covered items were discussed, and further consideration will be given this subject. Also discussed were the reasons behind the provision which makes it necessary to write a new prescription each time a medicine is provided a Title XIX patient. Also reviewed was the arrangement under which the use of a signature stamp is permitted. These items will continue to be discussed with the state officials.

The Subcommittee expects to follow the reorganization process occurring at this time in this area of state government, and it will continue to be available to the state officials to offer advice and counsel as possible.

Respectfully submitted,
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SUBCOMMITTEE ON REHABILITATION

(Referred to the Reference Committee on Legislation and Medical Service.)

At the 1967 session of the IMS House of Delegates, a resolution submitted by the Cerro Gordo County Medical Society urged application of the usual and customary fee concept in the medical evaluation programs carried on by the Division of Vocational Rehabilitation of the State Department of Public Instruction.

The House of Delegates approved the following statement in response to this resolution:

"Once again the opportunity is presented to reaffirm the Society's strong belief in the concept of usual and customary fees. Previous actions of the House of Delegates have declared that all negotiations with third parties should be on a usual and customary basis. It is recommended that this position be officially transmitted to the Division of Vocational Rehabilitation of the State Department of Public Instruction urging its implementation in the medical examination and service programs."

That action was transmitted to the Division of Vocational Rehabilitation following the 1967 annual meeting. A subsequent exchange of correspondence with Mr. Jerry L. Starkweather, director, Division of Rehabilitation Education and Service, culminated with a March 20 meeting of the Subcommittee with Mr. Starkweather and several of his associates. That meeting occurred following preparation of the Subcommittee's HANDBOOK report.

Opportunity was taken at this meeting to review the Society's extensive efforts to gain acceptance for the usual and customary fee concept. Reference was made to the rather widespread inclusion of this approach in various government, Blue Shield and commercial insurance programs. The representatives of Vocational Rehabilitation summarized for the benefit of the Subcommittee the evolution and the present status of the VR programs. It was reported that fees allowed under the rehabilitative programs are established by the Division, and their determination must be in compliance with federal regulations; they must also be set so as not to exceed authorized appropriations. It was reported further that fees in Iowa are

generally comparable with those provided in neighboring states.

There was agreement that more effective communication between Vocational Rehabilitation and the medical profession would be desirable. It was brought out that many physicians are uncertain as to what VR wants when it requests a general evaluation. It was agreed that the physician needs to have some indication of the specific disability he is to look for and evaluate, and he should be reimbursed fairly for his investment of time and knowledge. It was emphasized that a current medical evaluation of any magnitude is not possible for a $10 fee.

Techniques useful in the administration of a usual and customary fee program, e.g., local claims review, use of weighted means, etc., were summarized for the VR representatives. Mr. Starkweather reported that the VR program is not now funded for incorporation of the usual and customary fee concept, and he implied that he is bound by law to have a fee schedule. He acknowledged the growing acceptance of usual and customary provisions in governmental programs, e.g., Medicare, Medicaid, Military Dependents, etc. He was assured that increased physician cooperation would result from the implementation of this concept.

A suggestion was made by the Subcommittee that if for budgetary reasons VR is unable to adopt usual and customary provisions in the current biennium, that it consider at least a modest increase in the fee allowance for the general medical evaluation, as evidence of its desire to retain the cooperation of Iowa doctors. Mr. Starkweather expressed a willingness to take this proposal under advisement, and he indicated in March he would provide the Society with some decision or further word by mid-April.

As promised, on April 12 a letter was received from Mr. Starkweather. That letter read as follows:

"Thank you for the minutes of our recent meeting. Following the March 20 meeting with the Rehabilitation Committee of the Iowa Medical Society, I have met with members of our rehabilitation staff; and a revision of our medical fees has been made and placed into practice.

"While we do not have authority to use the 'usual and customary' fee concept at this time, it is our understanding that our Federal Office, the Rehabilitation Services Administration, has requested a legal opinion from the General Counsel of the Department of Health, Education and Welfare. We assure you that efforts will be made to prepare the budget for presentation to the Legislature at the next session with this goal in mind.

"We believe that the revised schedule will meet most if not all of the current criticism. The Disability Survey Exam (old General Medical Exam) with urinalysis will be paid at $15. Other examination fees have been correspondingly raised."

The Subcommittee feels this is a positive action on the part of the Division of Vocational Rehabilitation, and it has expressed its gratitude to Mr. Starkweather for his prompt attention to the matter. The Subcommittee plans to maintain its liaison with the Division and to provide whatever advice and assistance may be requested.

Respectfully submitted,
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W. D. DEGRAVELLES, JR., M.D.
T. J. GRETEMAN, M.D.
F. G. LOOMIS, M.D.
W. D. PAUL, M.D.
H. E. WICHERN, M.D.
D. C. WIRTZ, M.D.

NECROLOGY COMMITTEE

(The Speaker asked the members of the House of Delegates to rise during the reading of the names of members of the IMS who had died during 1967. The list appears on page 725 of this issue of the JOURNAL.)

Supplemental Reports of Special Committees

The Speaker next called for the presentation of supplemental reports from special committees.

COMMITTEE ON EXFOLIATIVE CYTOLOGY

(Referred to the Reference Committee on Miscellaneous Business.)

The Committee on Exfoliative Cytology has given considerable attention and study to a proposed Comprehensive Cancer Morbidity Study which is to be carried out in Iowa by the National Cancer Institute, through the Iowa Central Tumor Registry. The Iowa project will be a part of a nationwide survey of the extent and impact of cancer in the United States. The survey will be conducted over a three-year period (1969-1971) and will include 10 large cities and two states.

It is anticipated that the survey will provide physicians and public health officials with answers to important questions, such as variations in the incidence and prevalence of specific forms of the disease, and the economic cost of cancer to a community.

Medical data will be requested from physicians and obtained from hospital records, death certificates, and interviews. In addition, trained interviewers, having first received written permission from attending physicans, will obtain information from a selected number of patients on such matters as the amount of disability incurred, time lost from productive activity, cost of treatment, and sources of payment.

A preliminary study is currently being conducted in Birmingham, Alabama, as a pilot program. Questionnaires and procedures are being tested, cost of the main survey will be closely estimated, and usefulness of the ways of obtaining data will be determined.

It is anticipated that financial support for the national cancer survey will be received from the National Cancer Institute, the Regional Medical Program, and other sources.

In response to a request from the Iowa Central Tumor Registry that the Iowa Medical Society officially endorse the Comprehensive Cancer Morbidity Study, and consistent with recommendations of the Exfoliative Cytology Committee, the Executive Council recently approved a statement which indicates that the IMS approves the proposed study, in principle. However, the Executive Council directed that the IMS receive assurance that information obtained from the survey will not be released or utilized indiscriminately; that the IMS will have opportunity to review reports relating to the Iowa Study, prior to

release to the public or to other sources; that the IMS will be provided a listing of all individuals and organizations to whom information regarding the Iowa survey is released; and that the IMS will be provided copies of any reports or analyses of the cancer study which is currently being carried out in Birmingham, Alabama, so that in the event the results of the Birmingham study indicate a need for modifying the Iowa project, the IMS will have opportunity to offer constructive suggestions and recommendations.

The Committee on Exfoliative Cytology will maintain close liaison with the Iowa Central Tumor Registry during the implementation of the cancer morbidity study in Iowa.

Respectfully submitted,
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A. W. BROWN, M.D.
C. H. DENSER, JR., M.D.
D. O. HOLMAN, M.D.
C. A. JOHNSON, M.D.
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C. W. SEIBERT, M.D.
F. W. STAMLER, M.D.
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COMMITTEE ON EYE CARE

(Referred to the Reference Committee on Legislation and Medical Service.)

The IMS Committee on Eye Care has continued to involve itself in the tensions that have been produced, on the one hand, as some opticians and others on the national level have sought to limit or eliminate the right of physicians to dispense eyeglasses and contact lenses; and on the other hand, as some optometrists and others in Iowa and other states have sought to circumscribe or eliminate the right of opticians to adapt and fit contact lenses.

Success in either of those efforts would seriously interfere with the freedom of the medical practitioner to render complete eye care in the manner that he feels is best for his patient and for his mode of practice. The national effort to secure the adoption of legislation restricting the right of the physician ethically to dispense eyeglasses and contact lenses does not appear to pose so serious a threat now as it did a year ago, but it is a matter which organized medicine must continue watching vigilantly.

On the other hand, if the effort to prevent opticians from fitting and adapting contact lenses were to be successful in Iowa, the physicians who elected to continue serving patients for whom contact lenses were indicated would be forced to assume the time-consuming functions of personally performing or supervising the adapting and fitting of such lenses. Your Committee strongly feels that the individual physician should have the right to choose either ethically to dispense these eyeglasses and/or lenses, or to prescribe them and utilize the services of opticians, and it feels that any interference with that professional freedom, through legislation or otherwise, should be vigorously resisted.

In the report made to the House of Delegates last year it was pointed out that in an opinion dated December 28, 1966, the solicitor general under Attorney General Lawrence Scalise would have precluded opticians from adapting and fitting contact lenses. It was further reported that on March 9, 1967, Attorney General Richard Turner overruled that opinion and held, instead, that "Any person with . . . a written prescription or order [from a duly licensed practitioner] can both dispense and adapt contact lenses or any other ophthalmic lens or lenses."

The first attorney general's opinion had the effect of stimulating the Iowa opticians into energetic action and in uniting them on a program designed to protect their right to adapt and fit contact lenses. Accordingly, as reported in this Committee's last year's supplemental report, the opticians sponsored a proposed Optical Dispensing Licensing Act (SF384; HF389) which passed one House of the General Assembly and failed of enactment in the other House by five votes. Representatives of your Committee met with representatives of opticianry and agreed upon some modifications of the legislation in order to make it less objectionable to the medical profession. Representatives of your Committee were unsuccessful in requesting that the opticians withdraw their support from the Bill in the 1967 General Assembly and concentrate on framing a superior measure to sponsor in 1969.

It became readily apparent to your Committee that the opticians were unwilling to let their fate rest on so slender a reed as an attorney general's opinion. Rather, they felt that the matter should be laid to rest by means of legislation, and developments which have occurred in the past year have tended to give some support to their position. One year ago there were approximately 10 supreme court decisions from other states which dealt with this question, and the decisions in them were equally divided between those which held that opticians could adapt and fit contact lenses and those which held that they were prohibited from undertaking any such activity. Within the past year there have been supreme court cases in Colorado, the District of Columbia, and South Carolina *all* of which have held that opticians cannot, under the laws of those jurisdictions, adapt and fit contact lenses. Also, the Committee has received some information which leads it to believe that some Iowa optometrists are considering the possibility of instituting a lawsuit in order to test the validity of Attorney General Turner's opinion. Also, your Committee has noted that in Wisconsin the state medical society fully supported a bill sponsored by the Wisconsin Society of Opticianry which would have created a registration law for opticians, and would have given the Wisconsin State Board of Medical Examiners authority to administer it. Your Committee has also been informed that approximately one-third of the states now have laws which license or regulate opticians.

Your Committee is also studying a lower court decision rendered on March 27, 1968, in a "bait advertising" case brought in South Dakota by the Board of Examiners in Optometry against an optical company and others. At the moment it is not entirely clear whether or not that decision would have an adverse effect upon medical practitioners.

Last year, your Committee recommended "that continued study be given to the possibility of enacting legislation so that this may be done by mutual agreement in the event the voluntary approach does not appear sufficient to solve existing and contemplated problems." In light of the developments which

have been outlined in this supplemental report, your Committee now recommends that the Committee on Eye Care and the Committee on Legislation be authorized to work with opticians and others in developing either a registration or licensure bill which would best protect the interests of the public and the physicians in Iowa, and that the position of the Iowa Medical Society with respect to any such proposed legislation shall be finally determined by the Executive Council of the Iowa Medical Society.

In making this recommendation your Committee is mindful of the December, 1958, action of the House of Delegates of the American Medical Association as (1) "Encouraging the voluntary registration of the paramedical personnel who assist physicians"; and (2) as opposing "the extension of governmental licensure and governmental registration at this time." The IMS Committee on Paramedical Services favorably noted that position in its 1959 and 1965 reports to the House of Delegates.

Your Committee on Eye Care also supports this general position but it believes that the best interests of the public and of the physicians of Iowa militate in favor of sound and acceptable legislation which would protect the rights of qualified opticians to continue adapting and fitting contact lenses in accordance with prescriptions written by licensed practitioners.

Respectfully submitted,
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R. H. WATT, M.D.
A. C. WISE, M.D.
A. E. BRALEY, M.D.

COMMITTEE ON QUACKERY

(Referred to the Reference Committee on Miscellaneous Business.)

In addition to its report published in the House of Delegates HANDBOOK, the Committee on Quackery wishes to inform the delegates about recommendations approved by the Committee at a meeting on March 6, and subsequently cleared for implementation by the Board of Trustees.

Specifically, it is hoped that the following appropriate preliminary contacts, it will be possible for representatives of the Iowa Medical Society to meet with members of the Iowa Basic Science Board in order to obtain pertinent and current information relating to basic science examination practices and procedures, and to consider other matters of mutual interest.

Subject to a positive response from the Basic Science Board, an *ad hoc* committee, consisting of representatives of the Committee on Quackery, the Committee on Medical Education and Hospitals, and the Board of Trustees, will be appointed at the proper time to participate in the proposed joint meeting.

It is also contemplated that a special conference will be scheduled in the fall for county medical society presidents and legislative contact men for the purpose of reviewing items of general legislative interest, as well as specific projects and activities of the Committee on Quackery.

The Committee believes it is of major importance that physicians have pertinent and factual information on the subject of the practice of chiropractic, and on matters relating to medical quackery. For this reason, county medical societies are encouraged to devote at least one meeting during the coming year to a discussion of these subjects. Members of the Committee will be happy to participate in and/or assist in the development of any programs in this regard.

The Committee will continue to seek counsel and guidance from appropriate bodies of the Iowa Medical Society as it develops and implements various programs designed to thwart all forms of medical quackery.

Respectfully submitted,
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W. D. EDGERTON, M.D.
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R. G. VERNON, M.D.
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COMMITTEE ON SPORTS MEDICINE

(Referred to the Reference Committee on Miscellaneous Business.)

In the HANDBOOK report of the Committee on Sports Medicine the matters of wrestling and weight control were given particular attention. The HANDBOOK report summarized the Committee's exploration of an existing "ideal weight determination formula" and made reference to its possible use in high school wrestling in Iowa. The formula (Hall Method) was worked out at the University of Illinois and is named for its originator, D. M. Hall, Ph.D.

Before further comment is made on the Committee's evaluation of the aforementioned Hall Method, the House of Delegates should know of the recent action of the Board of Control of the Iowa High School Athletic Association with respect to wrestling. To this end, the following excerpt from the January meeting of the IHSAA Board is provided:

". . . commencing with the school year 1968-69, a physician will be involved in determining the minimum weight at which a boy shall wrestle during the season, and that a written certificate of permission be required whereon shall be indicated the date of the examination, the designated minimum weight of the wrestler, the signature of the parent expressing permission for the boy to wrestle accordingly, and the signature of the doctor along with all necessary information indicating the physical condition of the boy. . . . All members were informed of the project now under way by several doctors representing the Sports Medicine Committee of the Iowa Medical Society with reference to the testing and finalizing of a method whereby satisfactory minimum weights might be established for wrestlers."

On April 3 the Committee on Sports Medicine met at IMS Headquarters to continue its evaluation of the Hall Method. As mentioned in the HANDBOOK report, the Hall Method is based on five measurements: standing height, chest width, chest depth, hip width and thigh circumference. With the aid of conversion tables, these measurements are converted into pounds and ultimately into a predicted weight for any given individual. The conversion tables have been evolved from a study of some 30,000 physically-fit Illinois 4-H boys and girls between the ages of 10 and 18. An illustration of the testing procedure is

presented in an effort to provide additional clarification:

	Subject	*Established Values*
Height	68″	63.8
Thigh Circumference	20.0	16.6
Hip Width	10.6	11.0
Chest Width	9.4	24.9
Chest Depth	7.0	15.7
Ideal Weight		132.0 pounds

As noted in the HANDBOOK report, the members of the Committee have tested the Hall Method on wrestlers in their several communities, with generally favorable results. In addition to their individual testing, the members of the Committee have evaluated a study recently conducted of 278 wrestlers in Iowa; this study included 119 participants in the 1968 State Wrestling Tournament. The study was conducted by Charles M. Tipton, Ph.D., director, Exercise Physiology Laboratory, Department of Physical Education, University of Iowa. A report on the study was presented to the Committee by Dr. Tipton at the April 3 meeting. In summarizing his study, Dr. Tipton made the following assertions: (1) The Hall Method is an appropriate procedure on which to predict the weight of individuals who wrestle in the State of Iowa; (2) Because muscular performance is impaired when a weight loss exceeds 10 per cent of normal body weight, a seven per cent differential should be the lowest limit permitted, and (3) The opportunity to establish norms for Iowa wrestlers can be obtained only by individuals who have been properly trained in the principles of measurement.

Based on the information provided by Dr. Tipton and the results of the independent testing by the members, the Committee approved the following three motions on April 3. The Committee requests that the House of Delegates offer its endorsement to these actions.

1. That the Iowa Medical Society's Committee on Sports Medicine recommend to the Iowa High School Athletic Association that it accept the Hall Method and employ it as a means of determining the minimum weight at which wrestlers may compete, making an allowance of seven per cent below the predicted weight of 154 pounds and a three per cent allowance below the predicted weight for those above 155 pounds, and that the program be subjected to a careful annual review.

2. That the Iowa Medical Society's Committee on Sports Medicine recommend to the Iowa High School Athletic Association that it appoint individuals, other than members of the coaching staffs, to make the Hall measurements on wrestlers, and further, that those individuals be instructed and certified in the use of the Hall Method.

3. That the Iowa Medical Society's Committee on Sports Medicine recommend to the Iowa High School Athletic Association that it authorize procedures wherein physicians would participate in the adjudication of cases over which questions are raised, and further, that the physician be permitted and authorized to certify any variance from the weight determined through application of the Hall formula.

The third motion is presented to care for the anticipated few instances when the formula may go awry. It is the Committee's feeling that physicians should be called on to provide professional adjudication on cases over which questions are raised and should have authority to overrule the formula determinations when the physician's professional judgment so indicates. In this way the medical profession will have the opportunity to contribute its expertise as necessary and will have a principal part in the implementation of the revised procedures, but will not have to provide direct supervision.

It is the impression of the Committee that the Iowa High School Athletic Association is seeking a scientific and uniform means of determining minimum weights of wrestlers and the Committee is optimistic that the IHSAA will accept the recommendations of the Society.

If the requested endorsement of these motions is provided by the House of Delegates, the Committee proposes to transmit them to the Iowa High School Athletic Association. The Committee will continue to work with the IHSAA to implement the revised weight determination program.

In conclusion it should be re-emphasized that the two-fold objective of this or any other weight determination program is that of (1) finding the safe minimum weight for a prep wrestler, and (2) assuring that he does not participate at a weight below the safe level. The deliberations of the Committee have been and will continue to be based on this premise.

Respectfully submitted,
W. R. VAUGHAN, M.D., *Chairman*
R. W. ANDERSON, M.D.
W. R. BLISS, M.D.
D. L. CHRISTENSEN, M.D.
R. Q. CHRISTENSEN, M.D.
H. D. NOBLE, M.D.
W. D. PAUL, M.D.
R. G. ROBINSON, M.D.
J. H. SPEARING, M.D.

TASK FORCE ON MEDICAL MANPOWER

(Referred to the Reference Committee on Miscellaneous Business.)

I am well aware that considerable attention has been focused on the activities of the Task Force on Medical Manpower—for one reason or another—so I am sure you have taken time to review the official report which appears on pages 82, 83, 84 and 85 of the HOUSE OF DELEGATES HANDBOOK.

As noted in the HANDBOOK report, after the abandonment of the "Iowa Physician Survey" by the Iowa Regional Medical Program, the Executive Council authorized the Task Force to develop an IMS questionnaire to elicit information pertinent to medical manpower resources, needs and capabilities in Iowa. The Council directed that any survey questionnaire developed by the Task Force be made available to a cross-section of Iowa physicians before being distributed. This was requested so that a sampling of opinion might be obtained as to the survey's value and effectiveness. Additionally, the Task Force was requested to submit a report to the 1968 House of Delegates outlining any future data-gathering plans.

A meeting of the Task Force was held on February 22, following the preparation of the HANDBOOK report. During the meeting, it was agreed it would be inadvisable at the present time to develop a Society manpower questionnaire; hence, this project has been tabled for the time being. However, the Task Force has obtained a copy of a well-devised manpower sur-

vey questionnaire prepared and distributed by the State of Illinois Board of Education, and it will be retained for evaluation in connection with any further consideration of a survey of Iowa physicians. The House of Delegates can be assured that if and when the Task Force elects to proceed with this project, it will again seek guidance and approval from the Executive Council.

Also at its February 22 meeting, Dr. John C. MacQueen, associate dean of the University of Iowa College of Medicine, presented statistical information relating to the number and location of Iowa physicians over the past 50 years. Before continuing this report, I request permission of the House to call upon Dr. MacQueen to highlight the information he has gathered, so that the members will have a better understanding of the patterns developing with respect to medical manpower.

(Dr. MacQueen then gave a review of the physician-distribution problem in Iowa, illustrated by numerous lantern slides.)

I am sure even this cursory review by Dr. MacQueen has given you a good indication of the changing trends in physician distribution and availability. Certainly this information underscores the need for positive planning in providing medical care to all citizens of Iowa.

The Task Force believes it is essential that physicians, and community leaders as well, understand the true nature of the medical manpower situation in Iowa—past, present and future—so that through coordinated planning, we can devise programs that will assure the most efficient and effective use of our health care resources—manpower, facilities and money.

For this reason, the Task Force submits the following recommendations for consideration by the House of Delegates:

1. That the IMS, through its Task Force on Medical Manpower, be authorized to arrange and sponsor a series of area or district meetings, involving all county medical societies, on the subject of "Medical Manpower in Iowa."
2. That Dr. MacQueen be invited to present, in detail, information pertaining to physician availability and distribution, as a featured part of the program that is developed.
3. That the Health Planning Council of Iowa, the voluntary health planning agency spearheaded by the IMS, be invited to participate in the meetings, as a co-sponsor.
4. That representatives of regional or local voluntary health planning councils be invited to attend the district or area meetings, and also that county medical societies be encouraged to invite community leaders —e.g., local government officials, chamber of commerce representatives, legislators, etc.
5. That, if feasible, the data prepared by Dr. MacQueen be published in the JOURNAL OF THE IMS prior to the scheduling of area or district meetings, and that an independent summary of the material be distributed to all members in a separate mailing.

Finally, for your information, may I mention an event which is scheduled to take place in Iowa City on Tuesday, May 7. As indicated in the Task Force Report in the Delegates' HANDBOOK, efforts have been made this year to strengthen ties with the students in the College of Medicine. This May 7 event is a product of this effort. All medical students and their wives have been invited on this evening to attend a special conference on medical practice opportunities in Iowa. This conference is a joint project of the Society, the Iowa Chapter of the Student American Medical Association and the College of Medicine. A copy of the program is attached for your information.

Respectfully submitted,
EXECUTIVE COMMITTEE
B. M. MERKEL, M.D., *Chairman*
J. T. MCMILLAN, M.D.
L. D. CARAWAY, M.D.
T. D. THROCKMORTON, M.D.
R. B. STICKLER, M.D.

RESOLUTIONS

WRIGHT COUNTY MEDICAL SOCIETY

NO. 1. DUES PAYABLE ON REINSTATEMENT OF IMS MEMBER

(Referred to the Reference Committee on Articles of Incorporation and By-Laws.)

WHEREAS, The unknown but considerable numbers of Iowa physicians who do not belong to the Iowa Medical Society (and, automatically, are denied AMA membership) may want to rejoin the IMS, and

WHEREAS, The present By-Laws contain a punishment clause (Ch. VI, Sec. 3, Page 30) requiring the payment of an extra year's dues before the current year's dues are accepted, therefore, be it

Resolved, That the punishment clause (Ch. VI, Sec. 3, Page 30) be eliminated, in order that the IMS may regain those members (and, automatically, the AMA may regain those members).

POLK COUNTY MEDICAL SOCIETY

NO. 2. OBJECTION TO THE DOWNGRADING OF THE COUNTY MEDICAL SOCIETY

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, The Iowa Medical Society has always advocated the strength, integrity, and necessity of the constituent county medical societies of the 99 counties of Iowa, and

WHEREAS, The basic strength of the medical profession has always been in the county medical society, as attested by the fact of required membership therein, and

WHEREAS, The Board of Trustees of the American Medical Association has, in a recent executive session, endorsed a report and resolution of its Interspecialty Committee stating "that there has been a decline in the influence, prestige and effectiveness of the average local county medical society as a unit of medical organization," and

WHEREAS, That report recommended "physician participation in democratic medical organizations on a *community* basis," thereby deemphasizing the importance and necessity of county medical society membership and, further, recommending the establishment of *community* medical societies in place of county medical societies, and

WHEREAS, This action of the Board of Trustees of the American Medical Association has been used to downgrade county medical societies and to reduce advertising revenue for those county societies that publish bulletins, therefore, be it

Resolved, That the Iowa Medical Society by action of the members of its House of Delegates met in annual session, May 1, 1968, do hereby recognize again the value and effective strength of the county medical society as the foundation of organized medicine, and further, be it

Resolved, That the Iowa Medical Society instruct its delegates to the American Medical Association to support this resolution as its position before the Board of Trustees, officers and members of the House of Delegates of the American Medical Association.

FAYETTE COUNTY MEDICAL SOCIETY
NO. 3. INDIVIDUAL RESPONSIBILITY

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, All men, including physicians, are endowed by their Creator with certain unalienable rights, and among these are life, liberty and the pursuit of happiness, and

WHEREAS, Medical care is a service performed by physicians, all of whom are mortals, and

WHEREAS, A license to practice medicine is granted in Iowa only after examination by the State Board of Medical Examiners, and

WHEREAS, It is a privilege, and not a right, for a physician to be allowed to practice medicine in Iowa, now, therefore, be it

Resolved, That the Iowa Medical Society recognizes that it is a privilege and not a right for a patient to seek and receive medical care, and that it is the privilege and responsibility of each patient to seek the services of the physician of his choice and to make arrangements for compensating that physician in a manner mutually agreeable to the patient and the physician.

POTTAWATTAMIE COUNTY MEDICAL SOCIETY
NO. 4. DISTRICT CAUCUSES OF THE IOWA MEDICAL SOCIETY

(Referred to the Reference Committee on Articles of Incorporation and By-Laws.)

WHEREAS, Each district caucus of the Iowa Medical Society now consists of the delegates chosen by the constituent county medical societies in that district, as set forth by the Articles of Incorporation of the IMS, and

WHEREAS, A caucus so constituted frequently fails truly to represent the majority of the physicians within that district because of their unseen and varied geographical distribution within that district, and

WHEREAS, Even greater activity by our entire physician population concerning policy formation and representative selection is increasingly desirable because of the complexity and multiplicity of our current problems *and* because we feel that the IMS should epitomize democracy in action and truly be representative of its entire physician membership, now, therefore, be it

Resolved, That the Articles of Incorporation of the IMS be so amended as to allow an additional representative to each district caucus for every 15 members of a county medical society, in addition to the delegates to which that county is entitled by the current Articles of Incorporation, these representatives to have full voting privileges only at the district level, in contradistinction to the duties and privileges of the aforesaid delegates.

POTTAWATTAMIE COUNTY MEDICAL SOCIETY
NO. 5. DEEMPHASIZING OF THE IMS JOURNAL

(Referred to the Reference Committee on Reports of Officers.)

WHEREAS, All members of the Iowa Medical Society receive a copy of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION at weekly intervals, and

WHEREAS, All members of the Iowa Medical Society receive one of the specialty journals published by the American Medical Association at monthly intervals, and

WHEREAS, More new publications in various fields are constantly appearing, and

WHEREAS, Members of the Iowa Medical Society have available many publications to present their contributions and have many publications to read to "keep up," and

WHEREAS, The JOURNAL OF THE IOWA MEDICAL SOCIETY is no longer needed as a source of scientific information, and

WHEREAS, Publication of the JOURNAL by the Iowa Medical Society is an expensive undertaking, be it

Resolved, That the Iowa Medical Society deemphasize the publication of the JOURNAL. Publication of a MID-WESTERN JOURNAL with participation with Societies of other mid-western states would appear logical. If this is not feasible, publication of the JOURNAL at three- or four-month intervals would be more than adequate.

STORY COUNTY MEDICAL SOCIETY
NO. 6. THERAPEUTIC ABORTION

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, At its meeting in Atlantic City in June, 1967, the AMA House of Delegates adopted the following statement as the policy of the American Medical Association:

The American Medical Association is cognizant of the fact that there is no censensus among physicians regarding the medical indications for therapeutic abortion. However, the majority of physicians believe that, in the light of recent advances in scientific medical knowledge, there may be substantial medical evidence brought forth in the evaluation of an occasional obstetric patient which would warrant the institution of therapeutic abortion either to safeguard the health or life of the patient, or to prevent the birth of a severely crippled, deformed or abnormal infant.

Under these special circumstances, it is consistent with the policy of the American Medical Association for a licensed physician, in a hospital accredited by the Joint Commission on Accreditation of Hospitals, and in consultation with two other physicians chosen because of their recognized professional competence who have examined the patient and have concurred in writing, to be permitted to prescribe and administer treatment for his patient commensurate with sound medical judgment and currently established scientific knowledge. Prior to the institution of a therapeutic abortion, the patient and her family should be fully advised of the medical implications and the possible untoward emotional and physical sequelae of the procedure.

In view of the above, and recognizing that there are many physicians who on moral or religious grounds oppose therapeutic abortion under any circumstances, the American Medical Association is opposed to induced abortion except when:

(1) There is documented medical evidence that continuance of the pregnancy may threaten the health or life of the mother, or

(2) There is documented medical evidence that the infant may be born with incapacitating physical deformity on mental deficiency, or

(3) There is documented medical evidence that continuance of a pregnancy, resulting from legally established statutory or forcible rape or incest may constitute a threat to the mental or physical health of the patient;

(4) Two other physicians chosen because of their recognized professional competence have examined the patient and have concurred in writing; and

(5) The procedure is performed in a hospital accredited by the Joint Commission on Accreditation of Hospitals.

It is to be considered consistent with the principles of the American Medical Association for physicians to provide medical information to State Legislatures in their consideration of revision and/or the development of new legislation regarding therapeutic abortion.

Resolved, That the Story County Medical Society, and in turn the Iowa Medical Society, endorse this policy of the American Medical Association, and declare its willingness to support and advise on legislation, that would modify the present law in Iowa, consistent with this policy.

BLACK HAWK COUNTY MEDICAL SOCIETY
NO. 7. REVISION OF PROCEDURES IN MALPRACTICE TRIALS

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Increasing frequency and larger askings in malpractice lawsuits have forced the medical profession in certain instances to withhold treatment rather than possibly be sued for a bad result, and

WHEREAS, The courts have frequently allowed the use of *res ipsa loquitur* ("the thing speaks for itself") in malpractice cases, and

WHEREAS, Such a bill has been passed in at least one of the states to tighten malpractice claims, and

WHEREAS, The Iowa Medical Society's purpose is to provide the best possible medical care to the people of Iowa, therefore, be it

Resolved, That the Iowa Medical Society recommend and seek enactment of statutes requiring the plaintiffs in malpractice cases (1) to establish that the defendant lacked or failed to exercise ordinary care and the skill of a physician of his training, and that the defendant's failure was the proximate cause of injury, and (2) to require that instructions to juries include the admonition that *res ipsa loquitur* does not apply in medical malpractice cases.

BLACK HAWK COUNTY MEDICAL SOCIETY
NO. 8. O.M.V.I. BLOOD-ALCOHOL LEVEL INDICATION FOR INTOXICATION

(Referred to the Reference Committee on Legislation and Medical Services.)

WHEREAS, The AMA House of Delegates has recommended establishment of a minimum standard of blood-alcohol for intoxication, and

WHEREAS, The National Safety Council has set 0.10 per cent as the level for intoxication (Utah has a 0.08 per cent), and

WHEREAS, 35 states have enacted legislation establishing such a level for intoxication, and

WHEREAS, Repeated analyses of series of accidents have demonstrated a substantial alcohol content in the blood of most persons involved in fatal traffic accidents, and

WHEREAS, The Iowa Medical Society advocates measures to improve the health and safety of the people of Iowa, and

WHEREAS, Courts presently have no guide for establishing intoxication in O.M.V.I. and similar cases in Iowa, therefore, be it

Resolved, That the House of Delegates of the Iowa Medical Society recommend and take all appropriate action to encourage enactment of legislation by the 63rd General Assembly of the State of Iowa establishing ten-hundredths of one per cent as *prima facie* evidence of intoxication.

BLACK HAWK COUNTY MEDICAL SOCIETY
NO. 9. "GOOD SAMARITAN" LEGISLATION

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, Physicians, nurses and paramedical personnel frequently encounter accidents and other emergency situations, and

WHEREAS, Medico-legal harassment has become increasingly commonplace, and

WHEREAS, The best of emergency, first-aid care cannot be provided under threat of a lawsuit, therefore, be it.

Resolved, That the Iowa Medical Society recommend legislation to restrict the civil liability for damages of certain persons who give emergency care.

BLACK HAWK COUNTY MEDICAL SOCIETY
NO. 10. SPOKESMAN FOR MEDICINE AND TRUTHFUL REPORTING

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, Mass media commentary influences to a great extent the public's opinion of the medical profession, and

WHEREAS, Frequent published comments attributed to labor union officials, politicians, social workers, etc., serve frequently to discredit the physician, and

WHEREAS, Presidential declarations regarding the acceptance and progress of Medicare and other governmental programs are open to question and debate, and

WHEREAS, Any response or repudiation of untoward or erroneous remarks made concerning this nation's provisions for medical services lose much of their impact after 24 hours, therefore, be it

Resolved, That the Iowa Medical Society encourage and support those efforts at the national level which are directed at securing prompt, honest and clear reporting on medical subjects, and be it further

Resolved, That the Iowa Medical Society urge and assist county medical societies in developing closer liaison with local newspaper personnel to the end that reporting of medical news may be accomplished with the greatest possible degree of accuracy.

LINN COUNTY MEDICAL SOCIETY

NO. 11. ESTABLISHING QUALIFICATIONS FOR AMBULANCE DRIVERS

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, Our present state laws do not require ambulance drivers to have special qualifications for handling the sick or seriously injured, and

WHEREAS, The care rendered by such personnel may have a direct bearing on the survival or prognosis of such patients, and

WHEREAS, The injudicious use of ambulance sirens often can jeopardize the health of the occupants of the ambulance, as well as startle other drivers, and

WHEREAS, Such vehicles may travel from one county to another or from one state to another, and well-trained personnel may often be necessary, therefore, be it

Resolved, That basic qualifications for ambulance drivers be established, and be it further

Resolved, That a program of instruction for ambulance drivers be provided by the members of the medical profession in each county, covering the principles of first aid in surgical and medical emergencies, and be it further

Resolved, That such instruction in ambulance personnel be provided either directly by physicians or under their direction and guidance by the vocational and technical schools of their districts, and be it finally

Resolved, That on completion of this course of training the trainees be given cards or certificates indicating their qualifications.

SCOTT COUNTY MEDICAL SOCIETY

NO. 12. A VOTE FOR THE IMMEDIATE PAST-PRESIDENT IN THE IMS EXECUTIVE COUNCIL

(Referred to the Reference Committee on Articles of Incorporation and By-Laws.)

WHEREAS, The Articles of Incorporation of the Iowa Medical Society decrees that the immediate past-president shall be a non-voting member of the Executive Council, and

WHEREAS, Any member of the Society who has been entrusted with the high office of president should be granted, as immediate past-president, a vote in the Executive Council, therefore, be it

Resolved, That the first paragraph of Article IV, Section 16, of the IMS Articles of Incorporation be revised to add the words "Immediate Past-President" after the words "the President," and be it further

Resolved, That the second sentence in the above mentioned first paragraph be modified to eliminate reference to the immediate past-president.

CLINTON COUNTY MEDICAL SOCIETY

NO. 13. PURCHASE OF CONTROLLING INTEREST IN A NEWS MEDIUM

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, The medical profession has no free voice to the public. All of our ideas which we wish released to the public are expressed through public information media, press, radio and T.V. who edit these views with their own bias or as the controlling interest dictates. Such a situation does not allow us free expression of our views, and

WHEREAS, Too often derogatory articles about physicians appear in news media and we have little chance of retaliation or ability for refutation or rebuttal, therefore, be it

Resolved, That the Iowa Medical Society purchase outright or the controlling interest in a news medium such as a newspaper, radio station or T.V. station so that a free voice of medicine may be heard throughout our state and country.

SAMUEL P. LEINBACH, M.D., PAST PRESIDENT

NO. 14. UNITY OF THE MEDICAL PROFESSION

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, Ill-founded allegations made today against the time-honored profession of medicine serve only to erode the public confidence, and

WHEREAS, The need for an enlightened, forceful and unified posture on current medical matters is vital, and

WHEREAS, Physicians must be well informed regarding the numerous and complex health care programs, therefore, be it

Resolved, That individual physicians and county medical societies be urged to place maximum reliance on their Iowa Medical Society as a reference center for information having to do with medical programs proposed or existing within the state, and be it further

Resolved, That in this connection the medical profession utilize the Iowa Medical Society to the fullest extent possible as the voice through which it speaks, and be it finally

Resolved, That the 1968 House of Delegates regard the matter of unity as being of utmost importance to the state's medical profession at this and all times.

K. R. CROSS, M.D., DELEGATE, JOHNSON COUNTY

NO. 15. REVIEW OF THE AMERICAN MEDICAL ASSOCIATION RULES FOR AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS SCHOOLS OF MEDICAL TECHNOLOGY

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, The AMA rules formed by the A.S.C.P. Board of Schools of Medical Technology state that "When a school has enrolled no students for two consecutive years, the Director will be notified and the school recommended for removal from the AMA Accredited list," and

WHEREAS, The Iowa Association of Pathologists has met in its Executive Committee and appeals for removal of that restriction because of possible hardships on the smaller approved schools. We recognize the value of the continuous operation of the teaching programs for all concerned, but since procurement is at times difficult in areas where the population is low it may cause undue hardship on many schools of good quality and these may be all that sustains a quality laboratory service in many areas, and

WHEREAS, We consider warnings at two years and investigation for probation to be a better course of procedure much as the College Accreditation Boards follow, be it therefore

Resolved, That the Iowa Medical Society seek, through proper channels, to obtain changes in the American Medical Association rules governing approved status of American Society of Clinical Pathologists Schools of Medical Technology.

IDA COUNTY MEDICAL SOCIETY
NO. 16. MALPRACTICE SCREENING PANEL PROGRAM

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, Litigation in malpractice actions has been increasing in frequency, and

WHEREAS, Many such actions are initiated on the part of the plaintiff because of unanticipated poor results, or a deliberate attempt to get out of paying their bills, and

WHEREAS, In a number of states a panel composed of both physicians and attorneys has been set up for the purpose of screening malpractice cases and advising the parties thereto as to whether or not there is merit in the case, and

WHEREAS, Such panel provides an opportunity for settling disputes between physicians and patients outside of formal judicial review, which could work to the advantages of all parties, both financial and time wise, therefore, be it

Resolved, That one appropriate committee of the Iowa Medical Society study the desirability of establishing a Malpractice Screening Panel Program through the auspices of the Iowa Medical Society and, if possible, in conjunction with the Iowa Bar Association.

POLK COUNTY MEDICAL SOCIETY
NO. 17. INVITING THE IOWA MEDICAL SOCIETY TO MEET IN DES MOINES IN 1970

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, The Polk County Medical Society cordially invites the Iowa Medical Society to meet in the centrally located, convenient city of Des Moines in 1970, therefore, be it

Resolved, That the Iowa Medical Society hold its annual meeting in Des Moines April 26 to April 29, 1970.

POLK COUNTY MEDICAL SOCIETY
NO. 18. RECRUITMENT OF GENERAL PRACTICE PHYSICIANS FOR AREAS OF CRITICAL NEED

(Referred to the Reference Committee on Miscellaneous Business.)

WHEREAS, There is a medical manpower need for family physicians in rural and suburban areas of Iowa, and

WHEREAS, Approximately 120 physicians are currently being graduated from the State University of Iowa College of Medicine each year, and

WHEREAS, The National Advisory Committee on Health Manpower states that less than 2 per cent of the 7,000 physicians graduated from medical schools in 1955 and the 7,400 physicians graduated from medical schools in 1965 have entered general practice, and

WHEREAS, There are 7,801 students in the fourth year of medical school in this country this current year, and

WHEREAS, Many physicians enter military service following internship and subsequently take residency training, locate in urban areas and practice a medical specialty, therefore, be it

Resolved, That the following recruitment program be proposed to the House of Delegates of the Iowa Medical Society at its meeting in Des Moines, Iowa, April 28, 1968:

As an inducement to physicians about to be graduated from the State University of Iowa College of Medicine to engage in the general practice of medicine in Iowa communities where there is critical need for medical service, a group of students selected by personal interviews to determine their sincerity, ability and desire for general practice, not to exceed 5 per cent of the senior class, be guaranteed exemption from draft and fulfillment of their military obligation upon satisfactory completion of five years of general practice in an assigned critical area in the State of Iowa, which five year period will include one year of internship or a two-year residency or a second year of internship in family practice or general practice in lieu of one year of general practice, neither of which trainee programs need be taken in the State of Iowa; thus securing about six new general practitioners each year which number should not deprive the military services of their quotas, and be it further

Resolved, That this program be continued for five years thus providing critical areas in the State of Iowa with a total of 30 physicians engaged in general practice, and be it further

Resolved, That other states may utilize this recruitment program and select senior students in the medical school or schools of their state in a percentage adequate to meet or alleviate the critical need of that state without jeopardizing the economic structure of the state or any community within the state, and be it further

Resolved, That failure to comply with this agreement or complete the five year commitment would subject the individual physician to immediate military service, and be it further

Resolved, That if adopted, this resolution be revised to adapt to a national recruitment program by those states in which medical schools are located; and submitted by the Iowa delegation to the American Medical Association House of Delegates at the annual session in San Francisco in June 1968.

JOHNSON COUNTY MEDICAL SOCIETY
NO. 19. MEDICAL EXAMINER SYSTEM

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, The State of Iowa, under the present medical examiner system, lacks the legal and educational services inherent in the office of State Medical Examiner, therefore, be it

Resolved, That

1. The Iowa Medical Society sponsor legislation to provide for the office of State Medical Examiner, and

2. That the IMS be instructed to contact other interested governmental and private agencies to seek support of such legislation.

JOHNSON COUNTY MEDICAL SOCIETY
NO. 20. THERAPEUTIC ABORTION

(Referred to the Reference Committee on Legislation and Medical Service.)

WHEREAS, At its meeting in Atlantic City in June 1967 the AMA House of Delegates adopted the following statement as the policy of the American Medical Association:

The American Medical Association is cognizant of the fact that there is no consensus among physicians regarding the medical indications for therapeutic abortion. However, the majority of physicians believe that, in the light of recent advances in scientific medical knowledge, there may be substantial medical evidence brought forth in the evaluation of an occasional obstetric patient which would warrant the institution of therapeutic abortion either to safeguard the health or life of the patient, or to prevent the birth of a severely crippled, deformed or abnormal infant.

Under these special circumstances, it is consistent with the policy of the American Medical Association for a licensed physician, in a hospital accredited by the Joint Commission on Accreditation of Hospitals, and in consultation with two other physicians chosen because of their recognized professional competence who have examined the patient and have concurred in writing, to be permitted to prescribe and administer treatment for his patient commensurate with sound medical judgment and currently established scientific knowledge. Prior to the institution of a therapeutic abortion, the patient and her family should be fully advised of the medical implications and the possible untoward emotional and physical sequelae of the procedure.

In view of the above, and recognizing that there are many physicians who on moral or religious grounds oppose therapeutic abortion under any circumstances, the American Medical Association is opposed to induced abortion except when:

(1) There is documented medical evidence that continuance of the pregnancy may threaten the health or life of the mother, or

(2) There is documented medical evidence that the infant may be born with incapacitating physical deformity or mental deficiency, or

(3) There is documented medical evidence that continuance of a pregnancy, resulting from legally established statutory or forcible rape or incest may constitute a threat to the mental or physical health of the patient;

(4) Two other physicians chosen because of their recognized professional competence have examined the patient and have concurred in writing; and

(5) The procedure is performed in a hospital accredited by the Joint Commission on Accreditation of Hospitals.

It is to be considered consistent with the principles of the American Medical Association for physicians to provide medical information to State Legislatures in their consideration of revision and/or the development of new legislation regarding therapeutic abortion.

Resolved, That the Johnson County Medical Society, and in turn the Iowa Medical Society, endorse this policy of the American Medical Association, and declare its willingness to support and advise on legislation that would modify the present law in Iowa consistent with this policy.

LIFE AND ASSOCIATE MEMBERSHIPS

LIFE MEMBERSHIP RECOMMENDED ON THE BASIS OF 50 YEARS' PRACTICE AND 30 YEARS' MEMBERSHIP

County	*Name*
Calhoun	Melvin J. McVay, Lake City
Clinton	William W. Weber, Pomeroy Robert G. Mellen, Clinton
Des Moines	George J. Pearson, Burlington Ernest J. Voigt, Mediapolis
Iowa	Henry G. Moershel, Homestead Clyde F. Watts, Marengo
Lee	Robert L. Feightner, Fort Madison
Linn	Wayne J. Foster, Cedar Rapids Benjamin L. Knight, Cedar Rapids
Monona	Paul G. Ingham, Mapleton
Polk	William R. Hornaday, Sr., Des Moines George A. Jardine, New Virginia
Woodbury	Fredric L. Wilson, Sioux City
Pottawattamie	Kenneth L. Thompson, Oakland

ASSOCIATE MEMBERSHIPS RECOMMENDED ON THE BASIS OF RETIREMENT OR INCAPACITATION

Black Hawk	Caryl C. McIntyre, Waterloo Frederick H. Lohman, Waterloo Ivan Powers, Waterloo
Butler	Hugh G. MacLeod, Greene
Fayette	Bonnybel Hall, Maynard Cluley C. Hall, Maynard A. Erwin Berry, Oelwein
Linn	J. Kenneth von Lackum, Cedar Rapids
Polk	Frank J. Koenig, Des Moines Earl C. Lowry, Des Moines Elmer A. Vorisek, Des Moines Fred Sternagel, West Des Moines
Woodbury	Harry M. McCuistion, Sioux City John W. Schwartz, Sioux City

The physicians nominated for each of these membership categories were then approved unanimously.

The Speaker then announced the meeting places for the various reference committees and said that they would convene at 2:15 that afternoon. Delegates were informed that the House of Delegates would convene Wednesday morning, May 1, at 8:00 a.m. in the Grand Ballroom of the Savery Hotel. They were asked to report promptly. The House adjourned at 1:17 p.m.

WEDNESDAY SESSION, MAY 1, 1968

The Wednesday session of the House of Delegates was called to order at 8:10 a.m. The House approved the taking of attendance by registration cards. There were 106 delegates, 12 voting alternates and 17 ex-officio members present.

County	*Delegate*	*Alternate*
Adair	A. J. Gantz	
Adams	C. L. Bain	
Allamakee	B. R. Withers	
Appanoose	E. A. Larsen	
Black Hawk	C. D. Ellyson	
	G. R. Clark	
	D. E. Conklin	
	Fred Dick, Jr.	
Boone	E. E. Linder	
Bremer	V. H. Carstensen	
Buchanan	L. J. Flage	
Calhoun	R. P. Ferguson	
Carroll	A. D. Anneberg	
Cedar	G. H. Utley	
Cerro Gordo	L. C. Orton	
		A. J. Herlitzka
	E. D. Kennedy	
Chickasaw	H. S. Jacobi	
Clarke	H. E. Stroy	
Clinton	M. E. Barrent	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	Richard Schoonover	
Decatur-Ringgold	E. E. Gamet	
	D. E. Mitchell	
Delaware	J. E. Tyrrell	
Des Moines		F. G. Ober
	J. F. Foss	
Dickinson	D. F. Rodawig, Jr.	
Dubuque	K. K. Hazlet	
	D. C. Conzett	
Emmet	H. A. Lindholm	
Fayette	R. S. Jaggard	
Floyd	K. P. Steimel	
Franklin	R. E. Munns	
Fremont	F. M. Ashler	
Grundy	D. D. Preuss	
Hamilton	G. A. Paschal	
Hancock-Winnebago	L. R. Fuller	
	S. M. Haugland	
Hardin	J. J. Shurts	
Harrison	J. W. Barnes	
Ida	J. B. Dressler	

County	*Delegate*	*Alternate*
Jasper	R. F. Frech	
Jefferson		G. E. Egli
Johnson	K. R. Cross	
	G. R. Zimmerman	
	C. E. Radcliffe	
		A. S. Norris
Jones	L. D. Caraway	
Kossuth	R. E. Jongewaard	
Lee	L. C. Pumphrey	
	G. C. McGinnis	
Linn	R. M. Chapman	
	J. J. Keith	
	H. R. Hirleman	
	W. J. Robb	
	R. A. Sauter	
		R. W. Conkling
Madison	R. W. Carson	
Mahaska	G. W. Bennett	
Marion	Peter Van Zante	
Marshall	L. O. Goodman	
	R. G. Robinson	
Mills	M. L. Scheffel	
Monona	J. L. Garred	
Montgomery	Oscar Alden	
Muscatine		K. E. Wilcox
O'Brien	J. C. Peterson	
Page	G. H. Powers	
Palo Alto	H. L. Brereton	
Pocahontas	J. B. Thielen	
Polk	J. W. Green	
	J. T. McMillan	
	M. E. Alberts	
		M. H. Dubansky
		J. H. Dickens
	J. H. Kelley	
	A. N. Smith	
	W. R. Hornaday, Jr.	
		C. A. Trueblood
	W. Rindskopf	
	N. W. Irving	
		L. O. Ely
	J. G. Thomsen	
Pottawattamie	Hormoz Rassekh	
	I. J. Hanssmann	
	M. E. Olsen	
Poweshiek	H. R. Light	
Scott	J. F. Bishop	
		R. M. Perkins
	Erling Larson	
	C. B. Preacher	
Shelby	J. H. Spearing	
Sioux	L. K. Yates	
Story	G. E. Montgomery	
Tama		A. J. Wentzien
Union-Taylor	R. H. Kuhl	
	R. W. Boulden	
Wapello	R. A. Hastings	
	R. P. Meyers	
Wayne	K. A. Garber	
Webster	H. H. Kersten	
	L. J. O'Brien	
Winneshiek	T. F. Dynes	
Woodbury	P. M. Cmeyla	
	C. L. Beye	
	W. M. Krigsten	
	R. C. Larimer	
Worth	B. H. Osten	
Wright	D. A. Harding	

LIAISON DELEGATE

C. N. Hyatt

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

R. F. Birge
C. W. Seibert
P. J. Leehey
V. L. Schlaser
T. A. Burcham
J. H. Sunderbruch
K. E. Lister
R. L. Wicks
J. F. Paulson
J. M. Rhodes
H. E. Rudersdorf
L. W. Swanson
P. M. Kersten
C. J. Smith
S. P. Leinbach
O. D. Wolfe
G. H. Scanlon

Dr. Schlaser read the minutes of the April 28 meeting of the House of Delegates, and the House approved them.

The election of officers followed, and the following physicians were chosen:

President-elect	W. M. Krigsten, M.D., Sioux City
Vice-president	J. F. Paulson, M.D., Mason City
Trustee	K. E. Lister, M.D., Ottumwa
Speaker of the House	P. M. Kersten, M.D., Fort Dodge
Vice-Speaker of the House	L. D. Caraway, M.D., Monticello
AMA Delegates	L. W. Swanson, M.D., Mason City
	H. J. Smith, M.D., Des Moines
Councilor, District 2	H. G. Marinos, M.D., Mason City
Councilor, District 5	C. A. Trueblood, M.D., Indianola
Councilor, District 7	L. D. Caraway, M.D., Monticello
Councilor, District 8	J. F. Bishop, M.D., Davenport
Councilor, District 9	E. A. Larsen, M.D., Centerville
Blue Shield Liaison Delegates to IMS	J. M. Rhodes, M.D., Pocahontas
	S. P. Leinbach, M.D., Belmond

Dr. George B. Callahan, the first vice-president of the Illinois State Medical Society, Dr. V. J. Fisher, president of the North Dakota State Medical Society, and Mr. Roy Ragatz, executive director of the Interstate Postgraduate Medical Association of North America, were then introduced by Dr. Kersten and recognized by the House.

Dr. Kersten then asked if there was any old business to come before the House, and Dr. Schlaser recommended the following physicians for life and associate membeships.

LIFE AND ASSOCIATE MEMBERSHIPS

LIFE MEMBERSHIP RECOMMENDED ON THE BASIS OF 50 YEARS' PRACTICE AND 30 YEARS' MEMBERSHIP

County	*Name*
Cherokee	Clarence E. Broderick, Cherokee

ASSOCIATE MEMBERSHIP RECOMMENDED ON THE BASIS OF RETIREMENT OR INCAPACITATION

County	*Name*
Johnson	George D. Callahan, Iowa City

The physicians nominated were then approved unanimously.

Reference Committee Reports

The following reference committee reports were approved by the House of Delegates.

MISCELLANEOUS BUSINESS

The Reference Committee on Miscellaneous Business met in open session on April 28, following the meeting of the House of Delegates, to consider the five supplemental reports and 10 resolutions referred to the Committee.

SUPPLEMENTAL REPORT OF COMMITTEE ON HEALTH EDUCATION

Your Committee has been informed that the statement on sex education provided the delegates in this report may be subject to minor changes in wording before it is distributed. With the understanding that there will be no major changes in the content of this statement, we recommend approval of this supplemental report.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF COMMITTEE ON EXFOLIATIVE CYTOLOGY

Your Reference Committee feels that the Comprehensive Cancer Morbidity Study as outlined appears to be of marginal value in view of the current financial crisis confronting our federal government, and that it also seems to duplicate existing programs. The goals, philosophy and expected benefits were not ap-

parent to the Committee. Members of the Medical Society who discussed the report were not enthusiastic in their support of the project. Your Reference Committee therefore recommends disapproval of this supplemental report.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF COMMITTEE ON QUACKERY

Your Reference Committee recommends approval of this supplemental report.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF COMMITTEE ON SPORTS MEDICINE

Your Committee recognizes that the guidelines for weight limits for high school wrestlers proposed in this report are of a tentative nature, and are intended to provide working guidelines where no standards now exist. They are to be subjected to continuing review by members of the Committee on Sports Medicine.

With this understanding, we recommend approval of this supplemental report.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF TASK FORCE ON MEDICAL MANPOWER

Your Reference Committee recommends approval of this supplemental report.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 2—INTRODUCED BY POLK COUNTY MEDICAL SOCIETY ON OBJECTION TO THE DOWNGRADING OF THE COUNTY MEDICAL SOCIETY

Your Committee observed that it is already permissible for a county society to merge to any degree desired with one or more adjacent county medical societies when small membership rosters favor such action. With this understanding, your Reference Committee recommends approval of this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 3—INTRODUCED BY FAYETTE COUNTY MEDICAL SOCIETY ON INDIVIDUAL RESPONSIBILITY

The Committee is in sympathy with the intent of this resolution. In the interest of avoiding misunderstanding, we would substitute the following resolution: "The Iowa Medical Society believes that in a free society the primary responsibility for obtaining basic human needs, such as food, clothing, and medical care, rests with the individual citizen. In all circumstances the rights and prerogatives of individual physicians, who are also free citizens, must be accorded due consideration."

Mr. Speaker, I move the adoption of this portion of the report, as amended.

RESOLUTION NO. 10—INTRODUCED BY BLACK HAWK COUNTY MEDICAL SOCIETY ON SPOKESMAN FOR MEDICINE AND TRUTHFUL REPORTING

Your Reference Committee recommends approval of this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 11—INTRODUCED BY LINN COUNTY MEDICAL SOCIETY ON ESTABLISHING QUALIFICATIONS FOR AMBULANCE DRIVERS

Your Reference Committee recommends approval of this resolution with the deletion of the first "Resolved," i.e., "That basic qualifications for ambulance drivers be established."

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 13—INTRODUCED BY CLINTON COUNTY MEDICAL SOCIETY ON PURCHASE OF CONTROLLING INTEREST IN A NEWS MEDIUM

It is the opinion of the Reference Committee that the purpose of this resolution is fully covered by Resolution No. 10. We therefore recommend no action be taken on this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 14—INTRODUCED BY SAMUEL P. LEINBACH, M.D., PAST-PRESIDENT ON UNITY OF THE MEDICAL PROFESSION

Your Reference Committee recommends approval of this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 15—INTRODUCED BY K. R. CROSS, M.D., DELEGATE, JOHNSON COUNTY ON REVIEW OF THE AMERICAN MEDICAL ASSOCIATION RULES FOR AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS SCHOOLS OF MEDICAL TECHNOLOGY

(The House adopted the following revision of that resolution.)

WHEREAS, The AMA rules formed by the A.S.C.P. Board of Schools of Medical Technology state that "When a school has enrolled no students for two consecutive years, the Director will be notified and the school recommended for removal from the AMA Accredited list," and after January 1, 1969, all new schools must have a minimum of ten students, and

WHEREAS, The Iowa Association of Pathologists has met in its Executive Committee and appeals for removal of these restrictions because of possible hardships on the smaller approved schools. We recognize the value of the continuous operation of the teaching programs for all concerned, but since procurement is at times difficult in areas where the population is low it may cause undue hardship on many schools of good quality and these may be all that sustains a quality laboratory service in many areas, and

WHEREAS, We consider current evaluation procedures superior to evaluation on the basis of numbers of students or continuity of enrollment, be it therefore

Resolved, That the Iowa Medical Society seek, through proper channels, to obtain changes in the American Medical Association rules governing approved status of American Society of Clinical Pathologists Schools of Medical Technology.

Mr. Speaker, I move the adoption of this portion of the report, as amended.

RESOLUTION NO. 16—INTRODUCED BY IDA COUNTY MEDICAL SOCIETY ON MALPRACTICE SCREENING PANEL PROGRAM

Your Reference Committee recommends approval of this resolution as presented with the substitution of the words "Iowa Bar Liaison Committee" for "an appropriate committee" in the resolution.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 17—INTRODUCED BY POLK COUNTY MEDICAL SOCIETY ON INVITING THE IOWA MEDICAL SOCIETY TO MEET IN DES MOINES IN 1970

Your Reference Committee recommends approval of this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 18—INTRODUCED BY POLK COUNTY MEDICAL SOCIETY ON RECRUITMENT OF GENERAL PRACTICE PHYSICIANS FOR AREAS OF CRITICAL NEED

Your Reference Committee recommends adoption of this resolution with the following addition:

We believe that the Iowa Medical Society and the American Medical Association should attempt to obtain military deferment for any general practitioner who will locate and continue to practice in an area designated as a 'shortage area' by the appropriate state medical society.

It is the recommendation of the Committee that the sense of this Resolution be presented to the AMA House of Delegates in San Francisco in June, 1968, and be adapted to appropriate resolutions to be presented before that body.

Mr. Speaker, I move the adoption of this portion of the report, as amended.

Mr. Speaker, I move the adoption of this report as a whole, as amended.

Respectfully submitted,
H. H. KERSTEN, M.D., *Chairman*
E. D. KENNEDY, M.D.
J. B. DRESSLER, M.D.
F. A. ROLFS, M.D.
J. L. GARRED, M.D.

LEGISLATION AND MEDICAL SERVICE

The Resolutions and Supplemental Reports referred to the Reference Committee on Legislation and Medical Service were reviewed at an open hearing on Sunday, April 28, 1968, following the opening session of the IMS House of Delegates. An additional open hearing was held at 3 p.m., Monday, April 29, 1968, to provide further opportunity for members to express themselves on the subject of therapeutic abortion.

The Reference Committee met additionally in several executive sessions to evaluate the items assigned to it in relation to the comments presented at the open hearings. The Committee's recommendations to the House of Delegates are set forth in this report.

SUPPLEMENTAL REPORT OF THE IMS COMMITTEE ON EYE CARE

Your Reference Committee reviewed with interest this extension of last year's report having to do with the matter of the fitting and adapting of contact lenses by opticians. The Reference Committee was informed that the attorney general's opinion which now permits opticians to provide these services may be contested.

Your Reference Committee believes to be sound the existing basic policy of the Society which is to oppose the licensure of paramedical personnel and encourage voluntary registration.

However, your Reference Committee notes that exceptional circumstances exist in the field of eye care at this time, and therefore approves the recommendation that "the Committee on Eye Care and the Committee on Legislation be authorized to work with opticians and others in developing either a registration or licensure bill which would best protect the interests of the public and the physicians in Iowa."

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 8—INTRODUCED BY THE BLACK HAWK COUNTY MEDICAL SOCIETY ON O.M.V.I. BLOOD-ALCOHOL LEVEL INDICATION FOR INTOXICATION

Your Reference Committee has been told that the IMS Executive Council has previously endorsed the AMA minimum standards of blood-alcohol (0.10 per cent) for intoxication. Your Reference Committee is also cognizant of the close working relationship which has developed during the past several years between the Society's Committee on Safe Transportation and the Department of Public Safety. Therefore, your Reference Committee recommends that these two groups weigh further the desirability of the legislation advocated by this resolution. Subsequent to this evaluation, your Reference Committee asks that a report be presented to the IMS Executive Council in which the joint legislative recommendations of the Society and the Department of Public Safety might be set forth.

For purposes of guidance to the Executive Council and the Committee on Safe Transportation, your Reference Committee recommends the House of Delegates support this resolution; however, it is suggested that definitive action be held in abeyance pending Executive Council review of the aforementioned joint evaluation.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 7—INTRODUCED BY THE BLACK HAWK COUNTY MEDICAL SOCIETY ON REVISION OF PROCEDURES IN MALPRACTICE TRIALS

Your Reference Committee was informed that the problem described in this resolution is not an urgent one in the State of Iowa at this time. Your Reference Committee is inclined to agree with the legal counsel that the legislation advocated in this resolution be held in abeyance. Your Reference Committee believes there would be merit in having either the members of the Medico-Legal or Iowa Bar Liaison Committee of the Society create an opportunity to explore this subject with their counterparts from the legal profession.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 9—INTRODUCED BY THE BLACK HAWK COUNTY MEDICAL SOCIETY ON "GOOD SAMARITAN" LEGISLATION

Your Reference Committee is aware of the popularity of this type of legislation in the nation. It is also cognizant of the efforts which have been made by several groups in Iowa to secure passage of "Good Samaritan" type legislation. In assessing the comments

made at the open hearing both for and against this kind of legislation, your Reference Committee concludes that such a state statute is unnecessary at this time. Your Reference Committee believes the Society has a responsibility to make known to the membership that the absence of this legislation presents very little risk to the physician and should not deter him from rendering emergency care, should the occasion call for it. Your Reference Committee recommends this resolution from the Black Hawk County Medical Society be referred with these comments to the Committee on Legislation.

Mr. Speaker, I move the adoption of this portion of the report.

(This portion of the report failed of adoption. A motion was then made, seconded and adopted that Resolution 9 be approved in principle and referred to the Standing Committee on Legislation.)

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON NERVOUS AND MENTAL DISEASES

Your Reference Committee reviewed the supplemental report of the Subcommittee on Nervous and Mental Diseases with the chairman, both at the open hearing and in executive session. Your Reference Committee subsequently studied at some length the three items discussed in the Supplemental Report, and it offers the following recommendations:

1) That the House of Delegates encourage the Subcommittee to proceed with its proposed in-depth study of the development in Iowa of the comprehensive community mental health centers which are provided under Public Law 88-164. The limited knowledge of the Reference Committee is sufficient only to know that this is a complex area deserving close surveillance by the medical profession. This law provides for federal aid in the construction and staffing of comprehensive community mental health centers, employing a matching formula. Any such study of Public Law 88-164 must necessarily be broad, to include an evaluation of existing mental health programs, as well as those appearing on the horizon. Consideration in any such study should be directed principally at (1) finding the best means of serving the citizens of Iowa, and (2) at preserving the private practice of medicine in the state.

2) That the House of Delegates also endorse the Subcommittee's proposed study of insurance coverage for psychiatric care. In the conduct of this study, the Subcommittee is encouraged to seek what expertise may be available from Blue Shield in this area, as well as from the commercial insurors.

3) The lengthy "Position Statement" submitted to the Reference Committee for consideration is acknowledged to contain much information which should be of interest to the membership of the Society. The Statement summarizes Iowa's leadership in the unique development of local mental health clinics. Mental health clinics are supported by tax levies determined by county boards of supervisors and may serve a number of counties. Related to this is the national trend to encourage psychiatric care to return to the mainstream of medicine and make mental health care a local responsibiilty. The Statement also calls attention to changing mental health care patterns which are causing a decline in county or local influence while placing greater fiscal responsibility at the state level. Good or bad, this trend appears to be gaining momentum; Titles XVIII and XIX are instances wherein state and federal financial participation has replaced to a large extent the monetary involvement of the county.

The educative and consultative services of the Mental Health Authority have been of value to private medical practitioners of all specialties and to mental health clinics. The new state reorganization law provides for a Department of Social Services which includes a Division of Mental Institutions. The role of this Division will probably continue in the same pattern as in recent years. Your Reference Committee feels that the role of these groups should be kept under constant surveillance by the Subcommittee and by the Society. Your Reference Committee recommends that this "Position Statement" be received as information by the House of Delegates and be referred back to the Subcommittee for continued refinement.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON PUBLIC ASSISTANCE

Your Reference Committee commends the Subcommittee on Public Assistance for its efforts to maintain rapport with the soon-to-expire Board of Social Welfare and to establish a new line of communication with the recently organized Department of Social Services.

Your Reference Committee wishes further to commend the Society officers and the Subcommittee for the assistance provided the state in securing Dr. Otto Glesne to succeed Dr. Elmer Smith as director, Medical Services, State Department of Social Services. This appointment of Dr. Glesne seems certain to be of benefit to the State of Iowa in general, and it will assure a harmonious relationship with the medical profession.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee recognizes that complications are inevitable at the start of any program as large and complex as Title XIX. The combined efforts of the Department of Social Services, the State Comptroller's Office and Blue Cross-Blue Shield, as carrier, to iron out administrative problems as soon as possible is praiseworthy. As an example of this effort, a private consulting firm has only recently been employed to determine deficiencies and suggest solutions. It might be pointed out that Iowa physicians have been commended by representatives of the Department of Social Services for their excellent record in the preparation of Title XIX forms.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee is pleased to note that the go-slow attitude still appears to prevail among the state officials with respect to bringing other groups in Iowa under Title XIX. Attention is called to the proposed inclusion of medically indigent children under 21 in 1969, and your Reference Committee asks that the Subcommittee be alert to developments in this area.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee urges the Subcommittee to work with the Department of Social Services in

implementing those 1967 Social Security Amendments having to do with Title XIX. Professional medical guidance is all important in matters such as utilization review and your Reference Committee strongly believes the Subcommittee should provide this guidance to the Department of Social Services as the amendments and regulations in this area are considered.

Mr. Speaker, I move the adoption of this portion of the report.

The authorization of direct payment under Title XIX to physical therapists provoked some discussion in the open hearing. It was acknowledged that treatment provided by the physical therapist must be prescribed, supervised, and periodically reviewed by a physician. Even so, reservation was expressed as to the wisdom of permitting direct payment to these paramedical workers. Your Reference Committee urges the Subcommittee to review this matter with the Department of Social Services.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee encourages the Subcommittee to continue its discussions and offer its professional consultation on the additional information items mentioned in the report, e.g., organ transplants, the addition of non-legend drugs to Title XIX, utilization review of patients in Extended Care Facilities (Skilled Nursing Homes, etc.).

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON REHABILITATION

Reviewed at the outset of this supplemental report is the action of the 1967 House of Delegates which urged the Society to exert maximum effort to gain acceptance of the usual and customary fee concept by the State Division of Vocational Rehabilitation. The report indicates that positive communications have been established this year between the Subcommittee on Rehabilitation and the Division of Vocational Rehabilitation. Your Reference Committee is pleased to note this, and believes that more effective communication between Vocational Rehabilitation and the total Society membership would be highly desirable. Your Reference Committee commends the Committee on Rehabilitation for taking time to explain in some detail the concept of usual and customary fees to the officials of this state agency.

The five-dollar increase recently authorized in the fee for the Vocational Rehabilitation Disability Survey Exam, which resulted from discussions between the Society and Vocational Rehabilitation, is interpreted as an indication of the Division's desire to apply the usual and customary concept to each of its several programs. However, this failure to achieve total application of the usual and customary fee concept weakens the Society's position in other governmental programs where usual, customary, and reasonable fees are an accepted policy. In view of the expressed concern of government regarding the costs of medical programs and the exploration of means to reduce medical costs, the Subcommittee is admonished to exert all possible effort to attain the goal of usual, customary, and reasonable fees in the Vocational Rehabilitation programs. Your Reference Committee urges that dialogue between the Society and Vocational Rehabilitation be continued to that end.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON MEDICAL EXAMINER LAW AND RESOLUTION NO. 19—INTRODUCED BY THE JOHNSON COUNTY MEDICAL SOCIETY ON MEDICAL EXAMINER LAW

Your Reference Committee is pleased to note the recent appointment of a special subcommittee of the Committee on Legislation to evaluate the existing County Medical Examiner Law in the State of Iowa. Expressions offered at the open hearing would seem to indicate that revision of this law may be in order. Your Reference Committee believes that legislation calling for the establishment of a State Crime-Forensic and Toxicology Laboratory and the appointment of a state medical examiner (probably a forensic pathologist) deserves thoughtful study prior to the next session of the Iowa General Assembly, and it urges the Subcommittee to proceed with the total study, reporting when possible to the Executive Council. Your Reference Committee would encourage the Subcommittee to ascertain the thinking of at least a cross-section of the county medical examiners in connection with its study, and make what informational contacts seem appropriate, with such other groups as the State Board of Health, the State Department of Public Safety, etc.

Mr. Speaker, I move the adoption of this portion of the report.

HANDBOOK REPORT OF THE SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH; SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH, (1) THERAPEUTIC ABORTION; RESOLUTION NO. 6—INTRODUCED BY THE STORY COUNTY MEDICAL SOCIETY ON THERAPEUTIC ABORTION AND RESOLUTION NO. 20—INTRODUCED BY THE JOHNSON COUNTY MEDICAL SOCIETY ON THERAPEUTIC ABORTION

In previous reports on therapeutic abortion the House of Delegates has recommended that the IMS follow developments in this area. Now it seems that opinion has crystalized within the Society so that a reasonable position may be taken reflecting the desires of the majority of the members of the IMS. These basic guidelines can be used by the Executive Council, the Committee on Legislation, and the Subcommittee on Maternal and Child Health in developing and dealing with proposed legislation that may be introduced in coming Iowa General Assemblies.

Your Reference Committee submits to the IMS House of Delegates for endorsement the Statement on Therapeutic Abortion approved by the 1967 AMA House of Delegates. This Statement has been widely disseminated and is contained in the Supplemental Report of the Subcommittee on Maternal and Child Health.

In addition, your Reference Committee also submits the following guidelines which have been developed by the Subcommittee for use in any consideration of legislation:

1. The bill should repeal or modify existing provisions of Iowa law where this is indicated and should contain appropriate provisions as to the crimes of

abortion, attempted abortion, and distribution of abortifacients.

2. The bill would legalize the termination of a pregnancy only when:
 (a) The procedure is requested by the patient (with suitable provisions for obtaining such voluntary request in the case of patients who are under legal disability); and
 (b) There is documented medical evidence that continuance of the pregnancy may threaten the mental or physical health or life of the mother; or
 (c) There is documented medical evidence that the infant may be born with incapacitating physical deformity or mental deficiency; or
 (d) There is documented medical evidence that continuance of a pregnancy, resulting from legally established or reported statutory or forcible rape or incest may constitute a threat to the mental or physical health of the patient; and
 (e) Two other physicians chosen because of their recognized professional competence (both of whom should be psychiatrists in cases involving mental health) have examined the patient and concurred in writing; and
 (f) The procedure is performed by a licensed physician and surgeon in a hospital accredited by the Joint Commission on Accreditation of Hospitals.
3. The bill should expressly provide that the refusal of any hospital, physician, or person employed by a hospital, to participate in the medical procedures which result in the termination of a pregnancy shall not form the basis for any disciplinary action or recrimination against such hospital, physician, or person.

Your Reference Committee feels that the advocacy of therapeutic abortion under conditions outlined above does liberalize the present law, and does allow the individual physician to make his own decision as to his degree of involvement. However, many thorny problems, such as criminal abortion, unplanned or unwanted pregnancies, have not been solved in the preceding guidelines. The Reference Committee as a whole subscribes to the position that moderate, cautious and therapeutic liberalization of the abortion law reflects the opinion of the members of the IMS. The essence of the problem has to be decided by each individual physician in his own conscience.

Mr. Speaker, I move the adoption of this portion of the report, which is supported by the majority of the Reference Committee.

HANDBOOK REPORT OF THE COMMITTEE ON BLOOD BANKING

One section of this report (Page 52—HANDBOOK—Paragraph 1) has to do with the legal question of a blood transfusion's being represented as a "sale" rather than a "service." The report calls for the Society to underscore the fact that procurement of human blood and its transfusion to patients constitutes medical service so as to protect the blood banks in Iowa from unfair legal actions.

Your Reference Committee has been advised by legal counsel that this is not a problem for immediate concern. Your Reference Committee requests that this matter remain under surveillance and that any changes be reported to the Executive Council.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF THE SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH (2) IMMUNIZATION

Your Reference Committee strongly agrees with the Subcommittee on Maternal and Child Health that preschool administration of the now-accepted immunizations is most important to the well being of the youngsters of Iowa. The Subcommittee is to be commended for the analysis it has made of the laws in other states which make compulsory the pre-school administration of immunizations. Your Reference Committee concurs with the Subcommittee that the Society would be well advised to continue to encourage and support public education programs at the local or community level which are designed to immunize voluntarily the largest possible segment of the population.

Mr. Speaker, I move the adoption of this portion of the report.

Your Reference Committee noted those comments of the Subcommittee having to do with a recent news story charging the medical profession with failure to cooperate in encouraging mass measles immunization clinics. Your Reference Committee commends the president of the Society for his prompt release of a statement responding to these allegations, and it is hoped that his statement helped to set the record straight.

Your Reference Committee believes county medical societies should consider the desirability of immunization programs but recommends the House of Delegates reaffirm its belief that because of circumstances which may be unique in a particular county, a county medical society should retain the right to endorse any mass immunization program.

Mr. Speaker, I move the adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole, as amended.

Respectfully submitted,
L. J. O'BRIEN, M.D., *Chairman*
G. R. CLARK, M.D.
HORMOZ RASSEKH, M.D.
A. J. GANTZ, M.D.
G. C. MCGINNIS, M.D.

BLUE SHIELD

The Blue Shield Reference Committee held an open hearing on April 28 following the first session of the 1968 House of Delegates of the Iowa Medical Society. Members of the Blue Shield Board of Directors and of the Blue Shield executive staff, and members of the Medical Society were in attendance to participate in the discussion. The Committee considered the supplemental report of the Board of Trustees, Section III, and Exhibit C presented by Mr. William B. Recknor, executive director, Iowa Medical Service. The Reference Committee feels it essential to note that the majority of comments at the hearing were devoted to clarifying sections of the report and that there was an almost complete absence of opposition to the proposals outlined by the Board of Trustees. The report clearly sets forth the manner in which proposed contract modifications and other matters have been reviewed with the IMS in keeping with past actions of this House of Delegates. The members of the IMS Board of Trustees,

the Blue Shield Board of Directors and the staff of both organizations are to be commended for the obvious spirit of cooperation and trust which has manifested itself during the past year.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee reviewed the proposed contract modifications which again point up that Blue Shield is making an intensive effort to comply with requests of the House of Delegates, specifically relating to coverage for out-of-hospital services. The Reference Committee wishes to comment on each proposed modification, keeping in mind that these innovations apply primarily to group contracts and are elective additions to Blue Shield coverage.

1. *Home and Office Visits—Consultations:* This coverage will be provided essentially in group programs, and it will be sold only as a rider to active contracts. Benefits will be based on the usual and customary fee concept and will be paid for medical services rendered in the physician's office, in the patient's home, or in the outpatient department of a hospital. Benefits will be payable beginning the first day on which charges are incurred for the treatment of an accidental injury. As it applies to illness, the day of effective coverage will be negotiated separately with each covered group. For example, coverage could begin with the third office visit for any one illness.

The Reference Committee recommends approval of this coverage.

Mr. Speaker, I move adoption of this portion of the report.

2. *Extended Care Facility:* This coverage will be available only to those *under* 65. This seems appropriate since the vast majority of Iowa citizens *over* 65 have payment for these services provided under the Medicare program. This coverage is to be offered at no additional cost to the Blue Shield subscriber, and no prior hospitalization will be required. The Reference Committee feels this could well result in a reduction of overall cost to Blue Shield. Payment for physicians' visits in an ECF will be on the basis of one visit during each two days of inpatient care. This is merely a maximum coverage and will not obligate the physician to see the patient at any stated intervals.

The Reference Committee recommends approval of this coverage.

Mr. Speaker, I move adoption of this portion of the report.

3. *Diagnostic X-ray and Laboratory:* The House of Delegates has often expressed an interest in providing outpatient diagnostic coverage to discourage patients from requesting hospitalization. It is understood that the amount of dollar coverage for these services will be negotiated between Blue Shield and the involved group. The Committee expressed some concern regarding possible overutilization of this coverage, and suggests careful implementation of the program.

The Reference Committee recommends approval of this coverage.

Mr. Speaker, I move adoption of this portion of the report.

4. *Physical Therapy:* The Reference Committee is in agreement with this contract expansion but feels that care must be exercised to see that the prescription given by the physician is specific as to the services involved and as to length of the period of treatment, in order to discourage possible overutilization of this service. It is understood that under this program the physician will submit the bill, and no provision will be made for a physical therapist to bill independently.

The Reference Committee recommends approval of this coverage.

Mr. Speaker, I move adoption of this portion of the report.

5. *Vaccinations, Immunizations and Injections:* The Reference Committee appreciates the desirability of this type of coverage, but cautions Blue Shield to be specific in its interpretation of the type of injections to be paid for under the contract. The report mentions that conditions requiring frequent or repetitive treatment by the administration of injectable medications will not be covered. The types of injections included in this category should be well understood by the subscriber prior to sale of the contract.

The Reference Committee recommends approval of this coverage.

Mr. Speaker, I move adoption of this portion of the report.

6. *Medicare Complementary Coverage:* Individual members of the Reference Committee are cognizant that much confusion exists in the minds of Blue Shield subscribers and physicians as to the exact services covered under the Medicare Complementary Program. The proposed master complementary contract could eliminate much of the confusion, and should assist the physician and his office staff in interpreting the exact coverage to his patient.

The Reference Committee recommends approval of this coverage.

Mr. Speaker, I move adoption of this portion of the report.

In summarizing these proposed modifications, the Reference Committee wishes to compliment Blue Shield and the IMS on the scope of the proposals recommended. They should be welcome additions to the Blue Shield sales portfolio. These efforts to develop programs to discourage hospital overusage and to encourage outpatient and private-office practice for diagnosis and therapy demonstrate medicine's continued interest in providing medical care to patients at the lowest possible cost.

Mr. Speaker, I move adoption of this portion of the report.

Usual, Customary and Reasonable: The Board of Trustees' Supplemental Report, Section III, details the major provisions contemplated in a usual, customary and reasonable program. It is important to note that under this plan the charges of *all* physicians would be paid on the basis of usual, customary and reasonable fees. In 1966 this House of Delegates, when it approved the "Comprehensive" program to replace the old Blue Chip Program, adopted a policy wherein non-participating physicians were to be paid on a basis different from that accorded to participating physicians. The House did what was done in good faith to implement what it felt would be an essential element of control. That provision has perhaps resulted in some degree of discrimination against patients who are treated by non-participating physicians. The Iowa Medical Society and Blue Shield have never attempted to interfere with the patient's free choice of

physician and do not wish to establish any program which may result in this occurring. The Reference Committee, therefore, recommends that if and when feasible, the Blue Shield Comprehensive contract be changed to pay for the services of non-participating physicians on the basis of usual, customary and reasonable fees, rather than a fixed unit value based on the Iowa Relative Value Index.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee recognizes that the appearance of the word "reasonable" in the proposed UCR program implies an element of control. The Committee understands that Blue Shield will call upon the full services of the Iowa Medical Society and county medical societies in adjudicating those few cases which require more than internal administrative review. The Society has successfully implemented a state and county claims review system which is available to all third parties, wherein physicians' claims can be evaluated by a professional peer group. The Reference Committee believes that a usual, customary and reasonable fee program, as outlined in the Board's report, can and will be successful only to the degree that the claims review system functions effectively. The Committee is pleased to note that the existing comprehensive contract is functioning well and would not be superseded by the proposed UCR program. The Reference Committee recommends approval of a UCR program initially for national accounts, with the understanding that any extension of this type of coverage to other groups will be considered following adequate experience with the program.

Mr. Speaker, I move adoption of this portion of the report.

NATIONAL ASSOCIATION OF BLUE SHIELD PLANS' MEMBERSHIP STANDARDS: The Reference Committee was disappointed to learn that NABSP has not yet taken appropriate steps to return its By-Laws to a form wherein approval of a sponsoring medical society is required for operation of a Blue Shield plan. The officers and staff of the IMS should be commended for alertness in detecting the change in the NABSP By-Laws and taking steps, in cooperation with Iowa Blue Shield, to make certain that each Blue Shield Plan receives approval of a sponsoring medical society. The Committee requests the officers of the Iowa Medical Society and Blue Shield to continue following developments in this area, and to take what actions seem appropriate to correct this unfortunate situation.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee received some adverse comments regarding Blue Shield's function as carrier for Medicare Part B in Iowa and as administrative agent for the state in the Medicaid program. Members of the Committee recognize that administration of these programs is complicated and the amount of paper work involved voluminous. The Committee trusts that there will be continued improvement in the administration of Medicare and Medicaid claims, in the interest of all parties concerned. The House of Delegates should be reminded that Blue Shield assumed these responsibilities at the suggestion and with the encouragement of the Iowa Medical Society. With reference to Medicaid, it is reported that one of the major reasons for delay in claims payment has been the inability of the state to provide Blue Cross-Blue Shield with an accurate tape list of the persons eligible for coverage. Until the tape of those eligible was received, and that was several months following the effective date of the program, claims could not be processed in any volume.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee recommends approval of Supplemental Report, Section III, of the Board of Trustees in line with the comments and elaborations provided by the Reference Committee.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee reviewed Exhibit C, the Report of Blue Shield, and again calls attention to the close working relationship which exists between the Iowa Medical Society and Blue Shield. This relationship has obviously resulted in improvements in the coverage provided Iowa citizens through Blue Shield programs and has greatly enhanced the attitude of individual physicians toward Blue Shield.

Mr. Speaker, I move adoption of this portion of the report.

The Reference Committee also wishes to acknowledge continued efforts by Blue Shield to move all of its contracts in the direction of improved coverage, specifically the usual and customary fee type program, which is in keeping with past recommendations of the House of Delegates.

Mr. Speaker, I move adoption of this portion of the report.

One last item which deserves specific comment relates to the establishment of a Blue Shield Physician Information Center. In 1967 this House formally suggested that Blue Shield consider the establishment of a central informational source for physicians, and we are pleased to note that it will very soon become a reality.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of this report as a whole.

Respectfully submitted,
R. F. FRECH, M.D., *Chairman*
E. E. LINDER, M.D.
R. P. MEYERS, M.D.
P. M. CMEYLA, M.D.
J. G. THOMSEN, M.D.

ARTICLES OF INCORPORATION AND BY-LAWS

Three resolutions were referred to your Reference Committee on Articles of Incorporation and By-Laws.

RESOLUTION NO. 1—INTRODUCED BY THE WRIGHT COUNTY MEDICAL SOCIETY ON DUES PAYABLE ON REINSTATEMENT OF IMS MEMBER

In Resolution #1 the Wright County Medical Society asked for a revision of Chapter VI, Section 3 of the IMS By-Laws in order to permit a delinquent member to regain active-member status without paying dues for the year in which he became delinquent. The delegate from Wright County spoke in support of the resolution at the Committee's open hearing. He contended that in some instances physicians who wish to regain active membership cannot afford that additional ex-

penditure, and that by insisting on collecting the penalty the IMS deprives itself and the AMA of annual dues from a considerable number of physicians.

Several other members of the IMS—some of them are members of the Judicial Council—opposed adoption of the Resolution. From their remarks it appeared (1) that there are not a very large number of physicians who might be regained as IMS and AMA members if the reinstatement penalty were abolished; and (2) that in the future, if there were no penalty, IMS membership could be expected to fluctuate considerably, from year to year, as various doctors alternately expressed their disagreement with the Society's actions by dropping out of the Society for one year and rejoining it for the next.

Your Reference Committee doubts that payment of the penalty would impose a real financial hardship upon any delinquent member who desired reinstatement. It points out that the physicians who might be restored to membership if there were no penalty probably would increase the IMS roster by no more than one per cent. It feels that the present penalty should be retained so that physicians will be inclined to think twice before dropping their membership. Thus, your Reference Committee recommends disapproval of Resolution #1.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 4—INTRODUCED BY THE POTTAWATTAMIE COUNTY MEDICAL SOCIETY ON DISTRICT CAUCUSES OF THE IOWA MEDICAL SOCIETY

In Resolution #4, the Pottawattamie County Medical Society proposed changing the IMS Articles of Incorporation and By-Laws to permit each county medical society an additional representative at its district caucus for each 15 members. Such additional representatives would vote only at the district caucus level.

The Pottawattamie County delegate who testified at the Reference Committee hearing explained that in his district it is impossible to interest his Society's delegates in attending a caucus because Pottawattamie County, with 69 physicians has three delegates, and the eight other counties with a total of 61 physicians have a total of seven delegates.

Other physicians who spoke at the hearing reported difficulty in arousing enthusiasm about attending caucuses for a diametrically opposite reason. In the Fifth District, your Committee was told, the Polk County delegates can caucus, and if they agree to vote as a unit for a nominee for councilor, for example, there is nothing to justify holding a district caucus because Polk County has one more delegate than all of the other counties put together. A physician on the faculty of the University of Iowa College of Medicine said that much the same type of situation exists in the Seventh Councilor District.

Your Reference Committee concluded that district caucuses are poorly attended, throughout the state, for various reasons. It thus felt that the change proposed in Resolution #4 would not remedy the problem in all districts and would actually increase the problem in many districts. Your Committee recommends disapproval of the resolution and recommends a restudy of the districting of the Iowa Medical Society.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 12—INTRODUCED BY THE SCOTT COUNTY MEDICAL SOCIETY ON A VOTE FOR THE IMMEDIATE PAST-PRESIDENT IN THE IMS EXECUTIVE COUNCIL

In Resolution #12, the Scott County Medical Society proposed changing Article IV, Section 16 of the Articles of Incorporation to grant the immediate past-president of the IMS the right to vote at meetings of the Executive Council. The spokesman for the Scott County Society felt that denying that vote had been an ill-considered action. Two other doctors who had taken part in denying the past-president that privilege agreed that it had been an unfortunate thing to do and spoke in support of Resolution #12.

In consequence, your Reference Committee proposes that Article IV, Section 16 of the IMS Articles of Incorporation be amended (1) by inserting "the Immediate Past-President," after "President," in the first sentence thereof; and (2) by deleting the second sentence thereof and substituting the sentence "The Alternate Delegate to the American Medical Association shall be a non-voting member of the Executive Council."

Mr. Speaker, I move the adoption of this portion of the report.

Mr. Speaker, I move the adoption of the report, as a whole, as amended.

Respectfully submitted,
PAUL FERGUSON, M.D., *Chairman*
G. A. PASCHAL, M.D.
D. E. CONKLIN, M.D.
K. A. GARBER, M.D.
D. F. RODAWIG, JR., M.D.

Later, the House voted to reconsider its adoption of the report of the Reference Committee on Articles of Incorporation and By-Laws, and then adopted the following authorizing amendment:

"Be It Further Resolved, That the chairman of the Board of Trustees and the Secretary of the Iowa Medical Society be and they hereby are authorized and directed to sign, acknowledge, record and publish the foregoing amendment to the Amended and Substituted Articles of Incorporation of the Iowa Medical Society, and to do all other things required by law to execute, complete and place in lawful effect said amendment."

Finally, the House readopted the report of the Reference Committee on Articles of Incorporation, as amended.

REPORTS OF OFFICERS

The Reference Committee on Reports of Officers met in open session on Sunday, April 28, 1968. Representatives of the Board of Trustees were among those in attendance.

The Committee considered the remarks of Dr. R. F. Birge, president of the Iowa Medical Society; Section I (General Activities) of the Board of Trustees' Supplemental Report; Section II (Finances) of the Board of Trustees' Supplemental Report; and Resolution #5 (Proposing deemphasis of the IMS JOURNAL).

REMARKS OF R. F. BIRGE, M.D., PRESIDENT IOWA MEDICAL SOCIETY

The Committee commends Dr. Birge on his concise and provocative statement regarding the need for an articulate and knowledgeable representative to speak for and on behalf of American medicine.

The Committee recommends that the following resolution proposed by Dr. Birge be submitted to the House of Delegates of the American Medical Association for consideration at its meeting in June, 1968:

Resolved, That organized medicine, through its American Medical Association, designate a spokesman with continuity in office empowered to speak out promptly and forcefully on the important medical issues of the day, to the end that the private practice of medicine will strengthen its position with the public and will overcome those who would seek to divide or destroy the profession.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF BOARD OF TRUSTEES— SECTION I (GENERAL ACTIVITIES)

The Board of Trustees deserves the appreciation and commendation of all Society members for the leadership it has demonstrated during the past year in directing the myriad activities and programs of the Iowa Medical Society.

The Committee wishes to call special attention to the following items:

a. The development of the IMS REPORT, which should prove to be a valuable aid in strengthening intraprofessional communications.

b. The spirit of cooperation which exists between the IMS and Blue Shield.

c. The successful implementation of the usual, customary and reasonable fee concept, not only with Blue Shield, but with other programs as well.

d. The preparation and distribution of informational kits on the subject of federal and state drug-abuse-control laws.

e. The Society's interest in and support of the Health Planning Council of Iowa. In this connection, the Committee wishes to endorse a recent statement of the Executive Council in which it was recommended that every effort be made to maintain and enhance the influence and effectiveness of HPCI; further, that the IMS and individual physicians become knowledgeable about and involved in such planning programs as the Iowa Regional Medical Program (P.L. 89-239) and Comprehensive Health Planning (P.L. 89-749), so that when appropriate, expert medical guidance and leadership can be exerted to discourage the implementation of ill-conceived programs that are neither practical nor feasible, and would be incompatible with the traditional concepts of patient care and professional practice.

f. The appointment of Otto N. Glesne, M.D., as director of the Division of Medical Services in the newly organized State Department of Social Services. Dr. Glesne succeeds E. M. Smith, M.D., who is currently serving in Viet Nam on a temporary medical assignment. Dr. Glesne is well qualified to assume his new position, and it is a foregone conclusion that he will be instrumental in promoting close liaison and cooperation between the IMS and the Department of Social Services.

Before concluding this section of the report, the Committee recommends that an official expression of appreciation be extended to Dr. Elmer Smith for his outstanding service as medical director for the Department of Social Welfare.

The Committee also wishes to underscore the portion of the trustees' supplemental report which commends Mr. Donald L. Taylor, executive vice-president, and his staff, for their efficient activity on behalf of the Iowa Medical Society.

Mr. Speaker, I move the adoption of this portion of the report.

SUPPLEMENTAL REPORT OF BOARD OF TRUSTEES— SECTION II (FINANCES)

The Committee commends the Board of Trustees on its objective and concise evaluation of the current and potential financial status of the Iowa Medical Society. After reviewing the Board's General Activities Report, it is obvious that much has been accomplished with the funds available.

The Reference Committee believes it is essential that the IMS continue and, where necessary and feasible, expand its scope of interest and activity.

The Committee carefully considered the alternatives proposed by the Board of Trustees in reference to underwriting IMS operational expenses—i.e., (1) extending the amortization period on the headquarters building from 1972 to 1976; (2) couple the mortgage extension with the sale of remaining property of the IMS immediately adjacent to the headquarters building on the east; (3) increase IMS membership dues $25, effective January 1, 1969.

In reference to alternatives (1) and (2), the Committee wishes to remind the delegates that at the 1967 Annual Meeting, the House endorsed the Board of Trustees' intention, for the purpose of conserving interest dollars, to pursue a rapid amortization of the mortgage on the new building. The Reference Committee agrees that this position should be maintained.

In reference to the alternative which calls for the sale of the Society's remaining unused property, the Reference Committee feels strongly that it should be retained since it represents the Society's only reserve. In addition, if it becomes necessary in the future, the property could be utilized to provide additional parking space.

Attention was also given to the feasibility of curtailing Society projects in an effort to reduce expenses. The Committee agreed that in the interest of both the profession and the public, it is essential for the IMS to continue to assume an active leadership role in guiding and implementing programs involving all aspects of health care.

In light of the considerations outlined in this section of the report, the Reference Committee recommends that alternative #3 of the Board of Trustees be approved, as follows:

Increase the dues $25, effective January 1, 1969; leave the payoff schedule on the building unchanged; and continue ownership of the extra property, unless in the judgment of the Board of Trustees it would be advantageous to dispose of it.

Mr. Speaker, I move the adoption of this portion of the report.

RESOLUTION NO. 5 RE IMS JOURNAL—INTRODUCED BY POTTAWATTAMIE COUNTY MEDICAL SOCIETY

The Committee regrets that the Pottawattamie County Medical Society did not have a representative appear at the open hearing to comment on Resolution #5.

The Reference Committee wishes to point out that at its meeting in 1967, a resolution similar to Resolution #5 was considered, but not adopted. Instead, the House of Delegates directed that the IMS JOURNAL be continued, and improved where feasible.

The Committee was advised during the Reference Committee hearing that the JOURNAL deficit has been reduced from approximately $18,000 in 1967 to approximately $8,000 in 1968.

The Committee was also informed that representatives of the IMS and other state medical societies in the Midwest have considered the possibility of joining together to publish a combined medical journal, but the proposal was not favorably received.

Consistent with previous actions of the House of Delegates, and in acknowledgment of the importance and value of the IMS JOURNAL, the Reference Committee recommends that Resolution #5 not be adopted.

Mr. Speaker, I move adoption of this portion of the report.

Mr. Speaker, I move adoption of the report as a whole.

Respectfully submitted,
N. W. IRVING, M.D., *Chairman*
B. R. WITHERS, M.D.
R. M. CHAPMAN, M.D.
R. E. JONGEWAARD, M.D.
J. P. TROTZIG, M.D.

The Speaker then asked if there was any new business to come before the House. Dr. Schlaser made a motion that the House of Delegates approve the actions of the IMS Board of Trustees from the date of the last previous annual meeting. The motion, which was worded as follows, was seconded and adopted:

Resolved, That the actions of the Board of Trustees of the Iowa Medical Society from the date of the last annual meeting to the present be and hereby are ratified and confirmed.

Dr. Schlaser also moved that the House of Delegates authorize the Board of Trustees to prepare a suitable testimonial to be presented to Dr. Richard Birge in recognition of his outstanding service as president of the Society. It was seconded and unanimously adopted.

Dr. C. D. Ellyson, of Waterloo, suggested that a letter of appreciation be sent, promptly, to the Association of Medical Assistants for its members' very fine hospitality in serving coffee Sunday morning, at the first session of the House of Delegates. His motion was unanimously adopted.

The Speaker announced that the organizational meeting of the Board of Trustees would be held immediately following the adjournment of the House of Delegates, and that the organizational meeting of the Judicial Council would occur at that time too. He also reminded the delegates that the installation of the new president of the IMS would occur following the formal adjournment and prior to those other two meetings.

The meeting was adjourned at approximately 11:35 a.m.

FIFTY YEAR CLUB MEMBERS

JUNE 15, 1968

Ash, William E. Council Bluffs

Banton, Oscar H. Charles City
Bartlett, George E. New Sharon
Billingsley, John W. Newton
Blaha, George A. Whitten
Block, Charles E. Davenport
Bowie, Louis L. Zearing
Braunlich, George Davenport
Brereton, Harold L. Emmetsburg
Brinkman, William F. Pocahontas
Broderick, Clarence E. Cherokee
Bullock, William E. Lake Park
Burke, Thomas A. Mason City

Carlson, Frank G. Mason City
Carstensen, Albert B. Linn Grove
Christensen, John R. Menlo Park, California
Clapsaddle, John G. Burt
Closson, Charles L. Walker
Commey, Roy M. Tujunga, California
Cooper, Gladys A. Lansing, Michigan
Cretzmeyer, Francis X. Emmetsburg
Crew, Arthur E. Marion
Crow, George B. Burlington
Cusick, George W. Davenport

Doane, Grace O. Des Moines
Downing, Leroy M. Cedar Rapids
Dyson, James E. Phoenix, Arizona

Egermayer, George W. Elliott

Feightner, Robert L. Fort Madison
Fillenwarth, Floyd H. Charles City
Fordyce, Frank W. Des Moines
Foster, Wayne J. Cedar Rapids

Gearhart, George W. Springville
Gernsey, Merritt Long Beach, California
Goggin, John G. Ossian
Gottsch, Erwin J. Shenandoah
Grubb, Merrill W. Galva
Gutch, Roy C. Chariton

Hamilton, Benjamin F. Jefferson
Hansen, Robert R. Marshalltown
Harken, Conreid R. Osceola
Harris, Ray R. Dubuque
Henkin, John H. Sioux City
Herrmann, Christian H. Middle
Hickman, Charles S. Centerville
Hill, Julia Ford Grinnell
Hollis, Edward L. Marengo
Hopkins, David H. Des Moines
Hornaday, William R., Sr. Des Moines

Ingham, Paul G. Mapleton

Jardine, George A. New Virginia
Jenkinson, Harry R. Iowa City
Jerdee, Ingebrecht C. Clermont
Johann, Albert E. Des Moines
Johnson, Amos E. Florence, Nebraska
Joynt, Albert J. Waterloo

Keech, Roy F. Cedar Rapids
Keeney, George H. Los Angeles, California
Kershner, Frank O. Clinton
Kiesling, Harry F. Lehigh
Kimball, John E. West Liberty
Kleinberg, Henry E. Des Moines
Knight, Benjamin L. Cedar Rapids

McCreight, George C. Carmel Valley, California
McHugh, Charles P. Ft. Lauderdale, Florida
McVay, Melvin J. Lake City
Magee, Emery E. Cedar Falls
Maplethorpe, Charles W., Sr. Toledo
Marker, John I. Davenport
Maxwell, Charles T. Sioux City
Mellen, Robert G. Clinton
Meyers, Frank W. Dubuque
Mitchell, Claire H. Cincinnati
Moershel, Henry G. Homestead
Murray, Frederick G. Des Moines

Neal, Emma J. Cedar Rapids
Neuzil, William J. Cedar Rapids
Noble, Nelle S. Des Moines

O'Brien, Stephen A. Mason City

Palmer, Carson W. Guttenberg
Parker, Robert L. Des Moines
Pearson, George J. Burlington

Rankin, William Keokuk
Reeder, James E., Sr. San Diego, California
Rohrbacher, William M. Iowa City
Rowley, William G. Sioux City
Royal, Malcolm A. Des Moines
Ruth, Verl A. Des Moines

Saar, Jesse L. Donnellson
Schnug, George E. Dows
Senska, Frank Iowa City
Senty, Elmer G. Davenport
Severson, George J. Slater
Simmons, Ralph R. Bloomfield, Connecticut
Smith, J. Ned Iowa City
Snyder, Raleigh R. Des Moines
Strawn, John T. Vinton

Taylor, Robert S. Davenport
Teufel, John C. Davenport
Thomas, Clyde E. Croton-on-Hudson, New York
Thomas, Colin G. Monticello
Thompson, Kenneth L. Oakland
Thornton, John W. Lansing
Traister, John E. Eddyville
Trey, Bernard L. Marshalltown

Van Camp, Thomas H. Breda
Van Metre, Paul W. Rockwell City
Victorine, Edward M. Cedar Rapids
Vineyard, Thomas L. Ottumwa
Voigt, Ernest J. Mediapolis

Walker, Thomas S. Riceville
Ward, Loraine W. Oelwein
Watts, A. Fred Creston
Watts, Clyde F. Marengo
Weber, William W. Pomeroy
Weston, B. Raymond Mason City
Whitaker, Ben T. Boone
Wilcox, Edgar B. Oskaloosa
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INDEX

Abortion, liberalization of laws governing, proposed, 730-731, 761ff., 771, 774, 780ff.
Accident-review board of State Department of Public Safety, 733
Alcoholism, Iowa commission on, 731
AMA-ERF check, presentation of, 756
AMA guidelines for evaluating voluntary health agencies, 746
AMA memberships, 722
AMA registry of adverse reactions due to occupational exposures, 737
AMA rules for schools of medical technology, resolution on, 773, 777
AMA Second National Congress on Socioeconomics of Health Care, 726
Ambulance drivers, resolution about qualifications for, 773, 777
Ambulance services in rural Iowa, 741
Annual meeting of 1970, place and dates for, 774, 778
Approval of past actions of Board of Trustees, 786
Area health facilities planning councils, 730, 770
Articles of Incorporation and By-Laws, Reference Committee on, 783-784
Articles of Incorporation and By-Laws, Standing Committee on, 724
Associate memberships, 775, 776
Athletic injury registry, proposed, 743
Attendance, 719, 775
Automotive safety, films on, 734

Baldridge-Beye Memorial Lecture, 759
Basic sciences examination, 768
Birge, R. F., M.D., resolution proposed by, 748, 785
Birge, R. F., M.D., remarks of president, 747ff., 784-785
Birge, R. F., M.D., testimonial letter to, 786
Black Hawk County resolution on blood-alcohol level for intoxication, 772, 778
Black Hawk County resolution on good Samaritan legislation, 772, 778
Black Hawk County resolution on malpractice trials, 772, 778
Black Hawk County resolution on spokesman for medicine, 772, 777
Blood-alcohol level for intoxication, resolution on, 772, 778
Blood banking, committee on, 720, 734, 781
Blue Cross requirement that blood must be billed by hospitals, 734
Blue Cross-Blue Shield physician's group program, 736
Blue Shield contract modifications, 726, 749, 753ff., 781ff.
Blue Shield doctor's service report, 723
Blue Shield executive director's remarks, 756, 781ff.
Blue Shield physician information center, 783
Blue Shield, National, 755, 783
Blue Shield, Reference Committee on, 781ff.
Blue Shield, Section III of Supplemental Report of Board of Trustees, 753ff., 781ff.
Boards of health, county, 729-730
Board of Trustees, resolution approving past actions of, 786
Board of Trustees, HANDBOOK report of, 723
Board of Trustees, supplemental reports of, 748ff., 781-785

Cancer in Iowa, proposed statistical survey of, 735, 766, 776
Caucuses, Pottawattamie County resolution on district, 771, 784
Chiropractic, 741, 768
Chronic illness, subcommittee on, 730
Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), 726ff., 749
Claims, delays in payment of Medicare and Medicaid, 755-756, 764, 783
Claims review committee, state, 744
Clinton County resolution on purchase of a news medium, 773, 777
Closed-panel practice, 747
Code of cooperation, medical-radio-press, 728, 751
Comprehensive cancer morbidity study, proposed, 735, 766
Comprehensive state mental health plan, 738
Comprehensive stroke-management program, proposed, 738
Contact lenses, opticians' adaptation of, 767ff., 778
"Continuum of care," proposed conference on, 730
Costs of medicial care, committee on, 735
County boards of health, 729-730
County Medical Society Officers, 788
County medical society, Polk County resolution objecting to downgrading of, 770, 777
Cross, K. R., M.D., resolution by, 773, 777

Dental health coverage under Blue Shield, 726
Diagnostic x-ray and laboratory coverage under Blue Shield, 754, 782
Disabled persons in need of vocational rehabilitation, proposed study of, 733
Dispensing by physicians, 729
District caucuses, Pottawattamie County resolution on, 771, 784
Doctor's service report, Blue Shield, 723
Drivers' license applicants, review of borderline, 733
Drug-Abuse Control Amendments of 1965, 729, 750
Drug storage and handling in nursing homes, 727, 732
Dues, IMS, 752-753, 783-784
Dues payable on reinstatement of IMS member, Wright County resolution on, 770, 783-784

Election, 776
Exfoliative cytology, committee on, 735, 766, 776
Extended care facilities, conference for administrators of, 727, 733
Extended care facilities in Iowa, 732
Extended care facility coverage under Blue Shield, 726, 754, 782
Eye care, committee on, 735, 767, 778

Fall Postgraduate Course for General Practitioners, 726
Family practice department at U. of I., proposed, 740
Fayette County resolution on individual responsibility, 771, 777
Fifty-Year Club members, 786-787
Film on disaster planning, 739
Films on automotive safety, 734
Finances: Section II of Supplemental Report of Board of Trustees, 752-753, 783-784
First Governor's Conference on Aging, 730
Formulary, national, proposed, 729
From the Office of the Secretary, 720ff.

General practitioners, fall postgraduate course for, 726
General activities: Section I of Supplemental Report of Board of Trustees, 748ff., 784-785
Generic prescribing, 729
Glesne, Otto N., M.D., appointed medical director of Department of Social Services, 751
Good Samaritan law, resolution advocating, 772, 778-779
Governor's Committee on Employment of Handicapped, 733
GP's, resolution on recruitment of, 774, 778
Grievance Committee, 724
Group insurance, committee on, 736
Group practice equals closed panel, 747
Guidelines for evaluating voluntary health agencies, AMA, 746
Guidelines for health education programs, 760

Hall method of ideal weight determination, 768
HANDBOOK FOR THE 1968 HOUSE OF DELEGATES, reports from, 719ff.
Handicapped, governor's committee on employment of, 733
Hardin, Robert C., M.D., remarks of, 756-757
Hart Bill, 729
Hawkeye Science Fair, 728, 759
Health Education Committee, 724, 760, 776
Health education programs, guidelines for, 760
Health facilities planning councils, area, 730, 770
Health Insurance Council, 727
Health Planning Council of Iowa, 738, 750, 770, 785
Helicopter ambulance service, 742
Highway safety programs, national uniform standards for state, 734
Home and office treatment coverage under Blue Shield, 726, 754, 782
Home health services, subcommittee on, 727ff., 730
Homemaker services, state council on, 728, 730
"Horizons Unlimited," 728
Hospital boards, physician representation on, proposed, 726
Hospital and nursing home utilization study, 727, 780

Ida County resolution on malpractice screening panel, 774, 778
Immunizations, proposed compulsory, 730, 762, 781
Implied warranty on blood, alleged, 734, 781
IMS dues, 752-753, 785
Independent laboratories, committee on, 736
Individual responsibility, Fayette County resolution on, 771, 777
Industrial health, committee on, 737
Industrial physicians in Iowa, proposed roster of, 737
Infection, prevention and control of in nursing homes, 727
Injury registry, athletic, proposed, 743
Insurance coverage for psychiatric care, 762
Instruction for laymen in emergency care of sick and injured, 742
Interprofessional activities, committee on, 729
"In the Public Interest" feature in the JOURNAL, 728, 729
Intoxication, resolution on blood-alcohol level for, 772, 778
Iowa Association of the Professions, proposed, 738, 749, 751-752
Iowa Comprehensive Mental Health Plan, proposed revision of, 762
Iowa Health Council, 728, 729, 749
Iowa Interprofessional Association, 729, 749-750
Iowa Medical Foundation, 728, 745, 757ff.
Iowa Medical Political Action Committee, 760
Iowa Nursing Home Association, liaison with, 732
Iowa Pharmaceutical Association, liaison with, 729, 732, 750
Iowa Regional Medical Program and comprehensive health planning, committee on, 738, 750
IRMP survey of physicians, abandoned, 738, 744ff., 769
Iowa State Fair exhibit, 728, 729

Johnson County resolution on abortion, 774, 780ff.
Johnson County resolution on medical examiner system, 774, 780
JOURNAL, 727, 771, 784-785
Judicial Council, report of IMS, 723

Keogh Law, new provisions of, 736

Laboratories, proficiency testing for independent, 736
Legislation and Medical Service, reference committee on, 778
Legislation, committee on, 725, 778, 779
Leinbach, S. P., M.D., resolution proposed by, 773, 777

Licensure of paramedical personnel, proposed, 744, 767ff., 778
Life and associate memberships, 775, 776
Linn County resolution on qualifications for ambulance drivers, 773, 777
Loans, medical student, 758ff.

MacQueen, John C., M.D., 770
Malpractice screening panel, resolution advocating, 774, 778
Malpractice trials, resolution on procedures at, 772, 778
Maternal and child health, subcommittee on, 720, 730, 761ff., 780, 781
Medicaid, 732, 749, 755-756, 764, 783
Medical Assistants' Advisory Committee, 739
Medical Assistants' Association, letter of appreciation to, 786
Medical education and hospitals, committee on, 726
Medical examiner law, subcommittee on, 760, 780
Medical examiner system, resolution on, 774, 780
Medical-hospital Statistical Subcommittee, 727
Medical manpower conference, proposed, 745
Medical manpower, task force on, 728, 744, 769ff., 777
Medical practice in hospitals and nursing homes, subcommittee on, 727
Medical-Radio-Press Code of Cooperation, 728, 751
Medical service, committee on, 726
Medical technology schools, resolution on AMA rules for, 773, 777
Medicare, 734, 735, 736, 744, 755, 783
Medicare complementary coverage under Blue Shield, 726, 754, 782
Medicare, military, 726ff., 749
Medicine and religion, committee on, 739
Medico-Legal Committee, 728
Meeting in 1970, place and dates for, 774, 778
Memberships, AMA, 722
Memberships, IMS, 721-722
Mental health care, position statement on, 762ff., 779
Mental health clinics, IMS standards for, 731, 762, 779
Military dependents' medical care program, 726ff., 749
Minutes of April 19, 1967, meeting, 719
Minutes of April 28, 1968, meeting, 776
Military Medicare, 726ff., 749
Miscellaneous Business, reference committee on, 776ff.

National Association of Blue Shield Plans, 755, 783
National emergency medical service, committee on, 720, 739
National Uniform Standards for State Highway Safety Programs, 734
Necrology Committee, 725, 766
Nervous and mental diseases, subcommittee on, 731, 762ff., 779
Nominating Committee, report of, 759
Nursing homes, drug storage and handling in, 727, 732
Nursing homes, prevention and control of infection in, 727
Nursing homes, study of care provided in, 727

Oakdale Sanatorium, vocational rehabilitation program at, 733
Office and home treatment coverage under Blue Shield, 726, 754
Officers and Committees 1968-1969, 789-791
OMVI blood-alcohol level for intoxication, 772, 778
Opticians, registration or licensure of, 767ff., 778
Optometrists, 767
Osteopath evaluation and enrollment program, 723, 740
Osteopathic and MD/DO Liaison Committees, 740
Outpatient-service coverage under Blue Shield, 726

Paramedical services, committee on, 743
Past-president, resolution advocating Executive Council vote for, 773, 784
Patient-eligibility guide for mental health clinics, proposed, 731
Pharmacists, liaison with, 729, 732
Physical therapists, direct payments to under Title XIX, proposed, 780
Physical therapy, coverage by Blue Shield, 754, 782
Physical therapy, manual on, 730
Physician representation on hospital boards, proposed, 726
Polk County invitation for 1970 meeting, 774, 778
Polk County resolution objecting to downgrading of county medical societies, 770, 777
Polk County resolution on recruitment of GP's, 774, 778
Position Statement on Mental Health Care, 762ff., 779
Pottawattamie County resolution on district caucuses, 771, 784
Pottawattamie County resolution on the JOURNAL, 771, 786
PRACTITIONER AND THE ELDERLY, 730
Preceptorship Committee, 740
Prescriptions for eyeglasses, 723
Prescription refills, 732
Pre-season conditioning for athletes, 743
President, remarks of, 747-748, 784-785
"Prevailing charge," 735
Procedures in malpractice trials, Black Hawk County resolution on, 772, 778
Proficiency testing for independent laboratories, 736
Prouty Company, 736
Psychiatric care, insurance coverage for, 762, 779
Public assistance, subcommittee on, 731ff., 764, 779
Publications Committee, 737
Public health problems, seminars on, 730
Public relations, committee on, 728
Purchase of news medium, Clinton County resolution on, 773, 777

Quackery, committee on, 741, 768, 777

Radio programs, 725, 728
Recknor, Wm., remarks of, 756
Record-keeping, importance of for doctors, 724
Recruitment of GP's, resolution on, 774, 778
Recruitment of medical and paramedical personnel, 744ff.
Redistricting of IMS, recommended, 784
Reference Committee Reports, 776ff.
Refills of prescriptions, 732
Regional medical program and comprehensive health planning, committee on, 738
REGISTER supplement on state of health care in Iowa, 728, 745, 751
Rehabilitation services, 730
Rehabilitation, subcommittee on, 733, 765, 780
Reinstatement of IMS member, dues payable on, 770, 783-784
Remarks of IMS President, 747ff.
Reports of Officers (HANDBOOK), 720ff.
Reports of Officers, reference committee on, 784ff.
Reports of Standing Committees (HANDBOOK), 724ff.
Resolutions, 770ff.
Retirement plans for physicians and their employees, 736
Revised Standards for Mental Health Clinics, IMS, 731
Rural Health Committee, 720, 741

Safe transportation, subcommittee on, 733
Schools of medical technology, resolution regarding AMA rules for, 773, 777
Science Fair, Hawkeye, 728
Scott County resolution about vote for past-president in Executive Council, 773, 784
Secretary, from the office of, 720ff.
Seminars on immediate care of sick and injured, 733
Seminars on public health problems, 730
Senior medical student conference, annual, 728
Sex-education programs, 724, 731, 760, 776
Skilled nursing homes, 732
Socioeconomics of health care, AMA second national congress on, 726
Speakers' Bureau, IMS, 725
Special Committees, HANDBOOK reports of, 734ff.
Special Committees, supplemental reports of, 766
Spokesman for medicine, 748, 772, 777, 785
Sports medicine, committee on, 742, 768, 777
"Standard Procedures for the Industrial Nurse," 737
Standard report form for Pap smears, proposed, 735
Standards for mental health clinics, IMS, revised, 731, 762
Standing Committees, HANDBOOK reports of, 724ff.
Standing Committees, supplemental reports of, 759ff.
State Claims Review Committee, 744
State Department of Public Safety, liaison with, 733
State Department of Social Services, 732
State departments, committee on, 729
State Health Department activities, monthly summaries of, 729
State Health Department Advisory Committee, 730
State Hygienic Laboratory, 736-737
State Council on Homemaker Services, 728
State of Health Care in Iowa, REGISTER supplement entitled, 728, 745, 751
Statistical survey on cancer in Iowa, proposed, 735, 766, 776
Story County resolution on abortion, 771, 780ff.
Stroke management program, proposed comprehensive, 738
Sunday session, April 28, 1968, 719
Supplement, REGISTER, on state of health care in Iowa, 728, 745, 751
Supplemental Reports of Board of Trustees, 748ff., 781-785
Supplemental Reports of Officers, 747ff., 784ff.
Supplemental Reports of Special Committees, 766ff.
Supplemental Reports of Standing Committees, 759ff.
Surgical assistants, IMS policy regarding, 744
Surgical charge, constituents of, 744
Survey of physicians by IRMP, abandoned, 738, 744, 769

Task Force on Medical Manpower, 728, 744, 777
Television program on recruitment of physicians, 745
Therapeutic abortion, proposed liberalization of laws on, 730-731, 761ff., 771, 774, 780ff.
Title XIX, 732, 749, 764, 779-780
Traffic accidents, 733ff.
Trauma seminars, 733
Treasurer, report of the, 722

Unity of the medical profession, resolution on, 773, 777
Usual and customary fee concept, 726, 731, 732, 735, 749, 755, 765, 780, 782
Utilization study, hospital and nursing home, 727, 780

Vaccinations, immunizations and injections covered under Blue Shield, 754, 782
Venereal disease control, 725
Veterans' Hometown Care Program, 726
Vocational Rehabilitation Division, 733, 765, 780
Voluntary health agencies, committee on, 746

Washington trip, 725
Wednesday session, May 1, 1968, 775
Weight determination for wrestlers, 742, 768, 777
Welfare medical programs, 731ff.
Woman's Auxiliary, advisory committee to the, 746
WORKING WITH OLDER PEOPLE, 730
Workmen's compensation program, changes in, 737
Wrestling, 742, 768, 777
Wright County resolution on dues payable on reinstatement of IMS member, 770, 783-784

Youthpower project, 731



Personals



Dr. J. W. Martin, who has retired from active practice after serving the Holstein area for 30 years, was honored on Sunday, May 5, by that community. Approximately 1,200 persons attended the Appreciation Day event. **Russ Kraai,** Holstein High School coach, presented Dr. Martin with an "H" blanket. Mr. Kraai related that Dr. Martin had sat on the bench at the football games for years and years. He said that Holstein was the only town to have such service. **Dr. Robert Martin,** son of Dr. and Mrs. Martin, will start his practice of surgery in Cherokee July 1, following his release from military service.

Dr. Kirk Strong, of Fairfield, was the guest speaker at a special meeting of the Jefferson County Hospital Auxiliary held on Saturday, May 18. Dr. Strong, who is chief of the medical staff at the Hospital, spoke on "Health Facilities and the Practice of Medicine in the Fairfield Area."

Dr. Robert W. Kent, of Tipton, attended the Cedar Valley Division Heart meeting held at the Amana Colonies on Wednesday, May 1. **Dr. Montague S. Lawrence,** a professor of thoracic surgery at the U. of I. College of Medicine, was the main speaker.

Dr. Glenn S. Rost, of Lake City, was elected vice-president of the Iowa Academy of Surgery, at its annual meeting held in Des Moines on April 29.

Dr. R. R. Jeffries, of Waukon, was honored by physicians and staff members at Waukon Veterans Memorial Hospital on Friday, May 24, in recognition of his birthday. A surprise family party was held at the home of **Dr. and Mrs. Bill Withers** on Sunday, May 19, to mark the occasion. Among the guests were his son, **Dr. James Jeffries,** of Waterloo, and his family.

Dr. W. Ashton McCrary, of Lake City, has been elected secretary of the medical staff of Stewart Memorial Community Hospital. Dr. McCrary fills the vacancy caused by the resignation of **Dr. John DeGroote. Dr. Dale Christensen,** chief of staff, made the announcement.

Dr. R. M. Johnson, of Denison, will leave July 1 for Washington, D. C., where he will stay for one month before going to Lagos, Nigeria. Dr. Johnson will be a medical attache to the U. S. Embassy in Lagos. He has practiced medicine in Denison since 1949.

The community of Donnellson held an open house in the Donnellson elementary school gym on Sunday, May 26, to pay tribute to **Dr. J. L. Saar** for his more than 50 years of service to the community. Dr. Saar graduated from the Chicago College of Medicine and Surgery in 1912, and practiced in Cantril for five years. He then served two years in the Army during World War I, and upon his discharge opened an office at Donnellson in 1919. "I've seen so many changes in 55 years, it's unbelievable, I don't see how I practiced 40 years ago," Dr. Saar declared. Back in those days there were no hospitals nearby, he recalled. "You sometimes had to operate on a kitchen table. You made splints with hammer and nails." He recalled a day which started at 7 a.m. when a section foreman took him on a railroad motor car to what used to be LaCrew (near Houghton) for the beginning of a series of stops to visit patients at Cottonwood, Houghton, Mt. Hamill, Argyle and Donnellson. Transportation ranged from the section car to the train, a mule team and horseback. Still working at 2 a.m. on what was technically the following day, he called on a patient with a bad toothache, and pulled the offending tooth with a pair of pliers. He got home at 3 a.m. That, he said, was a typical day for the small-town general practitioner in the early years of this century. He estimates he has delivered 3,200 babies during his years of service.

Dr. and Mrs. Saar moved to California in June, where their retirement home is Laguna Hills, Leisure World. Three of their sons are doctors: **Dr. Richard E. Saar** is an orthopedist in El Cajon,

California; **Dr. Jesse Lee Saar, Jr.,** is a surgeon in Burlington, Iowa; and **Dr. John William Saar** is a general practitioner in Keokuk, Iowa.

Dr. William H. Myerly, of Des Moines, was presented an alumni distinguished service award during the commencement exercises at Waldorf College, in Forest City. Dr. Myerly, a specialist in cardiovascular surgery is a 1939 graduate of Waldorf.

A panel discussion on rheumatic disorders was conducted at the Hawley Welfare Building in Des Moines on Saturday, May 25. Among the panel participants were **Drs. William A. Baird,** of Ames, **Erling Larson,** of Davenport, **H. N. Hirsch,** of Sioux City and **James E. Kelsey,** of Des Moines. Dr. Baird is an orthopedic surgeon; Drs. Larson and Kelsey are internists; and Dr. Hirsch is a general practitioner.

The medical staff and administration of Mercy Hospital in Cedar Rapids honored 13 doctors on Thursday evening, May 16, for a combined length of service of 682 years. The Cedar Rapids doctors honored were: **Benjamin L. Knight, Roy Keech, Frederick W. Mulsow, Emma J. Neal, Leo B. Sedlacek, Thomas F. Suchomel, Edward M. Victorine, John K. von Lackum, W. J. Neuzil** and **L. M. Downing.** Also honored were **Drs. Charles L. Closson,** of Walker, **Henry G. Moershel,** of Homestead, and **James V. Prouty,** of Naples, Florida.

Dr. LeRoy K. Berryhill, formerly of Newton, has been named medical director of the Mental Health Center in Fort Dodge.

Dr. Walter Kopsa, of Tipton, has been elected chairman of the Cedar County Board of Health.

At the annual meeting of the Iowa Heart Association held in Des Moines May 18-19, **Dr. E. A. Motto,** of Davenport, was elected president of the board to succeed **Dr. A. J. Herlitzka,** of Mason City. **Dr. Dale Harding,** of Eagle Grove, was elected to the Association's board as a director-at-large. Dr. Harding is president of the Wright County Heart Unit, which for three consecutive years has led the state in per capita giving to the annual Heart Fund Campaign. **Dr. James Coddington,** of Humboldt, president of the Humboldt County Heart Unit, was elected delegate director from the North Central Division. **Dr. D. M. Everson,** of Shell Rock, president of the Butler County Heart Unit, was elected an alternate delegate director from the 14-county area of the North Central Division. **Dr. James W. Rathe,** of Waverly, president of the Northeastern Division of the Iowa Heart Association, received the Association's Distinguished Service Certificate at the annual meeting.

Dr. Paul D. Boone, now assistant surgeon and house physician at St. Francis Memorial Hospital, in Sacramento, California, will begin general practice in Paullina in August. Dr. Boone, a native Iowan, graduated from Morningside College, in Sioux City, in 1962 and from the U. of I. College of Medicine in 1966. Dr. Boone served his year of internship at Sacramento County Hospital.

Dr. S. F. Singer, prominent x-ray specialist in Ottumwa for many years and nationally known for his work with the American Cancer Society, has suffered a serious heart attack in Ft. Lauderdale, Florida, where he and Mrs. Singer have been living. Dr. Singer is under intensive care in a Ft. Lauderdale Hospital, according to word received by his associates, **Drs. Richard A. Hastings, William W. Ireland** and **John A. Dotterer.**

A panel discussion on marijuana and other drugs was held in Burlington recently. **Dr. Ralph J. Rettenmaier,** a Burlington pathologist, was among the participants.

Dr. Kaye Check has announced that he will begin medical practice in Slater on July 8. He will be associated with **Dr. Wayne Severson.** Dr. Check is a 1966 graduate of the U. of I. College of Medicine and completed his internship at Iowa Lutheran Hospital in 1967. Since that time he has been a general practitioner in Des Moines.

Col. Sidney Brody, an Ottumwa physician specializing in internal medicine, will spend two weeks on active duty training with the U. S. Army Hospital (5501) of which he is a reserve officer. The U. S. Army Hospital (5501), an Army Reserve Unit, with headquarters at Ft. Snelling, Minnesota, is having its annual duty training at Ft. Riley, Kansas, June 9 to July 6.

Dr. and Mrs. W. E. Owen, of St. Ansgar, spent about a month—from mid-April to mid-May—doing medical missionary work at Utila, Bay Islands, Honduras. Dr. Owen provided the JOURNAL with an account of their experiences, and the following is a condensation of it. "We flew . . . from New Orleans to San Pedro Sula in a four-engine prop



plane, and from there to Utila in a tiny Cessna, but no problems. The first night I saw a postpartum bleeder, and the next day my wife and I opened a tiny one-room clinic for business. We had three days of over 64 patients, and saw a total of 640 in the office. We made quite a few house calls (mostly necessary) and delivered one 9 lb. 12 oz. baby after the mother had been in labor for 18 hrs.

"We did a lot of minor surgery—ganglions, lipomas, warts, skin tumors, etc. There is no formaldehyde there, and I brought back one black hairless mole pickled in alcohol. I also took off some basal and squamous-cell cancers, and would have brought some back for pathologic examination if I had had containers.

"My wife and I got up at about 6:30, had breakfast at 7:00 with the minister, his wife and two children, and then usually walked a mile to the beautiful sandy beach for an hour's swim. We posted office hours "10 to 12, and 2:30 to 5," but usually there were people waiting by 9:15, so we opened up and got to work. Most of the people speak English, but we had no trouble communicating with the few who speak only Spanish.

"I saw a lot of people for check-ups, and did a lot of gynecology. The minister's wife is far too busy to help, and nobody else there was trained, so my wife was invaluable, even though she is not a nurse. She helped with the surgery. We saw a lot of sick children—rheumatic fever, asthma and pneumonitis, and a couple of kids with nephrosis and nephritis. Many adults had hypertensive disease, but there were only a few real cardiacs. There were many mild diabetics. If one has a bad case, he doesn't survive, I guess. The people were courteous and appreciative. We charged 25¢, 50¢ and occasionally a dollar.

"We picked up bits and pieces of Mayan pottery and went fishing—but only a couple of times. The water ran short and finally ran out, and we carried water for the stool and to bathe in.

"Ascaris and whipworms infect almost everyone, children and adults alike. Pregnant women never have a prenatal exam, of course, or any care during pregnancy. The hospital and doctors at La Ceiba, 20 air miles away, can take the very ill, but many do not have the money to go there. I saw some fractures and took care of a few simple ones—without x-ray, of course.

"Of course we drank only boiled water, but still had a little bout with Montezuma's revenge. It was not easy living, but the people really appreciated having us, I am sure. The minister and his good wife are busy with the church and the high school (called "the college"), and were glad to be relieved of the clinic for three weeks.

Dr. H. R. Powers, of Emmetsburg, recently was congratulated by the Alumni Association of Rush Medical College on the fiftieth anniversary of his

graduation from that institution. As a memento, the Association sent him the Rush Alumni Pin, and the executive secretary of the group commented on it as follows: "The pin is made of 10-karat gold and takes its design from one which was awarded by the Alumni Association in the late 1800's. The last known date of the award was 1895, prior to the college's affiliation with the University of Chicago. You will notice that the design includes the year of your graduation, the name Rush and the crossed caducei and the torch of knowledge. The motto 'Fiat Lux' is the motto of the Alumni Association."

Dr. Englebert Dunphy, chairman of the Department of Surgery at the University of California School of Medicine, San Francisco, and a brother of **Dr. Donal Dunphy,** head of pediatrics at the U. of I., gave the major address at the University of Iowa's Medical Convocation on June 4. His topic was "The True Joy in Medicine." He is a past-chairman of the American Board of Surgery, and a past president and a member of the board of regents of the American College of Surgeons.

Dr. Jerry Jochims, a last year's graduate of the U. of I. College of Medicine who has been interning at Sioux Falls, is substituting for **Dr. Cornelius Maris,** in Sanborn, while Dr. Maris takes a two-month vacation.

The May issue of the University of Iowa SPECTATOR quoted **Dr. Walter M. Kirkendall,** head of the U. of I. Cardiovascular Laboratory, as saying that there is a markedly higher incidence of high blood pressure among Negroes than among whites. Studies, he reported, have shown that hypertension is twice as common among the blacks. He attributes a lesser role to tension.

Dr. Addison W. Brown, a Des Moines gynecologist, and **Miss Virginia Barckley,** of New York City, nursing consultant for the American Cancer Society, presented a cancer conference for nursing-home personnel at the Biltmore, in Sioux City, on May 22, and at St. Bernard's Catholic Church, in Osceola, on May 24. Both sessions were cosponsored by the Iowa Nursing Home Association and the American Cancer Society, Iowa Division, Inc.

Dr. Richard L. Vaught, who began the practice of urology in Sioux City this spring, served as master of ceremonies at the banquet meeting of the Iowa Association of Medical Assistants during the organization's annual meeting, in Sioux City, during May.

On May 15, **Dr. George Scanlon,** of Iowa City, related his experiences with *SS Hope* at a Nicaraguan port during 1966, at a meeting in Columbus

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Junction, June 5, sponsored by a women's organization of the Methodist Church there.

Dr. Sigmond H. Nadler, associate chief of cancer research surgery at the Roswell Park Memorial Institute, in Buffalo, New York, addressed the Woodbury County Medical Society on May 21, and the annual meeting of the Woodbury County Chapter of the American Cancer Society on May 22. Dr. Nadler is a 1957 graduate of the U. of I. College of Medicine.

Dr. Madelene Donnelly, director of the Division of Maternal and Child Health at the State Department of Health, participated in an institute on nursing care of low-birth-weight infants for 50 nurses from 20 northwest-Iowa hospitals, in Spencer on May 16. Two of the other speakers were **Dr. George Baker,** an assistant professor of pediatrics, and **Dr. Lowell R. Hughes,** an assistant professor of obstetrics and gynecology and of preventive medicine, at the U. of I. College of Medicine.

Dr. Stanley M. Anderson, who practiced for 25 years in Onawa and more recently has been on the staff of the Glenwood State Hospital and School, has moved to the Lincoln State School, in Lincoln, Illinois. The census at Lincoln is 4,400, making it the second-largest institution for the mentally retarded in the world.

Dr. J. F. Veverka, of Prairie City, has undertaken to write a weekly column for his town's newspaper, THE NEWS. His topics will be medical ones, but in the initial column he indicated that he intends relying upon readers to ask questions and propose subjects.

While attending a meeting at a motel near O'Hare Airport, near Chicago, on May 28, **Dr. Donovan F. Ward,** a Dubuque surgeon and a recent past-president of the AMA, suffered a severe coronary occlusion. He was hospitalized immediately, and at last report he was enough better so that he could be moved to a hospital near his home.

On May 28 **Dr. Walter Block** spoke on the Doman-Delacato therapy for brain-damaged children at a meeting sponsored by the directors of the United Cerebral Palsy Center in Cedar Rapids. Dr. Block is a pediatrician, and the meeting took place at the Mercy Hospital School of Nursing.

Dr. Adrian E. Flatt, a professor of orthopedic surgery at the University of Iowa, has been elected to membership in the French Hand Society. At the organization's recent meeting in Paris, Dr. Flatt made presentations on "Congenital Club Hand" and "Chemical Synovectomy in Rheumatoid Arthritis."

Dr. Dean A. Dutton, of Van Horne, has been elected to active membership in the American Academy of General Practice.

At the annual banquet of the Central College Alumni, in Pella on May 25, **Dr. Ronald Zoutendam,** a Sheldon general practitioner, was one of three recipients of Distinguished Alumnus awards. He took his B.S. at Central in 1954, his M.D. at the U. of I. in 1958, interned at Broadlawns, in 1958-1959, and has practiced in Sheldon ever since. He has been a director of the Chamber of Commerce since 1961, he has served as president of the Kiwanis Club, in 1966 he was an incorporator of the Sheldon Industrial Development Corporation, and he is a member of the Sheldon Park Commission. He and Mrs. Zoutendam (also a 1954 graduate of Central) have five children.

Dr. A. M. Yazdi, an obstetrician and gynecologist, has severed his connection with the Gilfillan Clinic at Bloomfield, to start a solo practice in Keokuk. He is the current president of the Davis County Medical Society, and necessarily will resign from that post. He practiced at Bloomfield for about 18 months.

Dr. James F. Speers, deputy commissioner of health and chief of community health services in the State Department of Health, has been appointed by **Governor Harold Hughes** to succeed **Dr. Arthur P. Long** as commissioner, when his resignation takes effect, July 1. Before moving to the State Department of Health in 1965, Dr. Speers was director of the Des Moines-Polk County Health Department for eight years. His appointment as commissioner is necessarily an interim one, and will become permanent only when the General Assembly convenes and the Senate confirms it, next winter.

Nearly 200 members of the Mu Gamma Chapter of the Phi Chi medical fraternity which became inactive more than 20 years ago on the U. of I. campus, have given $35,000 to the U. of I. Health-Sciences Library Fund. That sum constitutes proceeds of the sale of the chapter house, in the late 1940's, and the compounded earnings thereof. They will endow a staff office and the current periodicals room. **Dr. Emory D. Warner,** head of pathology and secretary-treasurer of the fraternity's U. of I. alumni, said that the chapter house was closed during World War II. "Those male medical

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Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

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Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

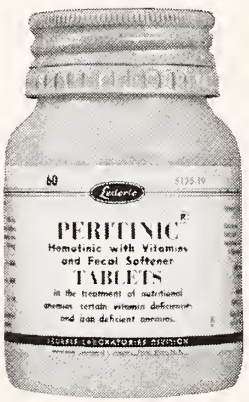
Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

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students around were married and not living in fraternity houses."

Dr. Robert C. Hardin, vice-president for medical affairs and dean of the College of Medicine at the University of Iowa, was named president-elect of the American Diabetes Association on June 13. He served as a vice-president of the 2,500-member organization during the previous year, and during his many years' membership he has been a member of the board of directors and has served as chairman of the committees on publications, annual program and scientific awards, and has been a member of the committees on research, professional education and postgraduate courses. In addition, Dean Hardin currently is chairman of the special review committee of the University Group Diabetes Program of the National Institute of Arthritis and Metabolic Diseases.

The Johnson County Medical Society held its annual picnic on June 5 at the home of **Dr. H. R. Jenkinson,** at Lake Macbride.

Dr. Gary P. Hayes, of Eldora, has been named water-safety chairman for the South Hardin County Chapter of the American Red Cross.

At the annual meeting of the Siouxland Blue Cross Plan, held in Sioux City on May 28, **Dr. James E. Reeder, Jr.** was reelected vice-chairman of the board, and **Drs. R. C. Larimer** and **Charles T. Maxwell** were chosen to serve on the board. All of them practice in Sioux City.

An editorial in the May 16 EMMETSBURG DEMOCRAT contained a report about **Dr. F. X. Cretzmeyer,** a Life Member of the Iowa Medical Society, who suffered a stroke nearly a year ago and has been hospitalized in Iowa City for a number of months. The visitor had found the doctor in good spirits, though his left side is partially paralyzed. The doctor's son **Francis,** the U. of I. track coach, and his son-in-law and daughter, **Dr. and Mrs. Frederick Staab,** live in Iowa City.

Dr. Walter Eidbo was elected president of the Polk County Heart Association on March 17. He is a Des Moines surgeon.

Gerhard Hartman, Ph.D., administrator of University Hospitals, Iowa City, was one of the first members to be appointed to the National Advisory

Allied Health Professions Council. Dr. Hartman is also director of the U. of I. graduate program in hospital administration. The 15 members of the Council will represent geographical areas, and they will advise the staff of the National Institutes of Health regarding implementation of the Allied Health Professions Personnel Training Act of 1966.

Robert E. Votteler, M.D., a Marshalltown psychiatrist, spoke in Belle Plaine on May 15, at a meeting of the Benton, Iowa, Poweshiek and Tama County Health Services. His subject was "The Patient Who Is Too Sick to Go to the Doctor."

At a meeting of the Society of Biological Psychiatry, in Washington, D. C., June 13-17, **Dr. Emery M. Gal,** a professor of psychiatry at the U. of I., presented a paper entitled "A Reassessment of the Mechanism of Reserpine-Produced Sedation."

Dr. Sidney Kripke, assistant medical director of the State Services for Crippled Children, addressed a meeting of school and public health nurses in Hampton, on May 10. His topic was the mentally retarded school-age child.

Dr. Lloyd Filer, a professor of pediatrics at the U. of I., participated in a seminar on the digestibility of fats by infants four to 10 days of age, at the Hormel Institute, Austin, Minnesota, on May 14.

Dr. William C. Keettel, head of obstetrics and gynecology at the U. of I., participated in the meeting of the American Gynecological Association and the Obstetrics and Gynecology Residency Review Committee on Thursday through Sunday, May 23-26, at Hot Springs, Virginia. At the AGA meeting, he read a paper "Palliative Value of Radiation in the Treatment of Recurrent Cervical Cancer." Co-authors of that report were **Dr. Howard B. Latourette,** a professor of radiology, and **Dr. Lee W. Van Voorhis,** an instructor in obstetrics and gynecology. Dr. Keettel is president of the Residency Review Committee, which periodically reviews all training programs in obstetrics and gynecology throughout the nation.

On July 1 **Dr. Don E. Woodard** is moving from Waterloo to Denver, Colorado. He is to be an assistant professor of obstetrics and gynecology at



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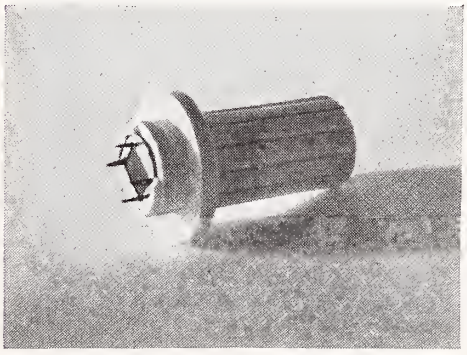
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the University of Colorado Medical Center, and he will conduct a private practice in the south-Denver area. For the past years he has been associated with **Dr. William L. Telfer,** in Waterloo.

The Seeing Eye, Inc., of Morristown, New Jersey, has made a $25,000 grant to the U. of I. Department of Ophthalmology. **Dr. Frederick C. Blodi,** head of the department, says the funds will be used for future construction and purchase of research equipment. The Seeing Eye, Inc., was founded in 1929, and initially trained guide dogs and trained blind people to use the dogs. In 1958 it initiated a grants program, and it broadened the scope of that program in 1965 to include support of projects related to the causes, treatment and prevention of blindness, or designed to increase the independence of visually-impaired adults and children.

James R. Fouts, Ph.D., a professor of pharmacology at the U. of I. College of Medicine, has been appointed to the Environmental Health Sciences Advisory Committee of the National Institutes of Health. The group advises the staff of the Institutes regarding grants—existing or proposed—in the environmental-health area.

In mid-June, **Dr. Lee Forrest Hill,** a Des Moines pediatrician, was hospitalized at Iowa-Methodist.

Dr. James W. Hopkins, of Des Moines, was one of 96 pediatricians elected to fellowship in the American Academy of Pediatrics at the organization's recent meeting in Evanston, Illinois. Eligibility requirements include certification by the American Board of Pediatrics and five years of post-medical school experience.

Dr. G. W. Bennett, of Oskaloosa, spoke to the local chapter of the Association of Medical Assistants, early in June, about the Mahaska County Hospital's plans for the handling of mass casualties in case of a disaster.

Dr. Craig D. Ellyson, of Waterloo, was one of two members of the board of directors of the Black Hawk County Tuberculosis and Health Association who received service awards from the organization on June 5. He has been a member of the board since 1945, he served as president of the Association from 1951 through 1953, and he has been a committee member at various times on both the state and local levels.

On July 1, **Dr. Peter R. Whitis,** a neuropsychiatrist from the University of Florida, Gainesville, and **Dr. Justo S. Avila,** who recently completed a residency in orthopedic surgery at St. Vincent's Hospital, Toledo, joined the staff of Medical Associates, Dubuque. **Dr. Brent J. Holleran,** who has completed a residency in general surgery and is currently receiving training in thoracic and cardiovascular surgery at the New York-Cornell University Medical Center, is to join the group on or before October 1.

The June JOURNAL should have reported that **Dr. Fredric L. Wilson,** of Sioux City, has retired and moved to Hester Heights (Eugene), Oregon. By printing the wrong middle initial, it may have given the impression that the younger Dr. Fredric Wilson had left the state.

Dr. Jack L. Bristow has joined **Drs. George W. Rowney, Edward J. Hagen** and **John D. Lutton** in the practice of obstetrics and gynecology at the Plaza Professional Center, 2916 Hamilton Boulevard, Sioux City. Dr. Bristow is a 1962 graduate of the U. of I. College of Medicine, he took his residency training at University Hospitals, Iowa City between 1963 and 1966, he spent the following two years in Air Force uniform at Tinker AFB, Oklahoma, and he will start work in Sioux City on July 15. He and Mrs. Bristow have an eight-year-old son, and daughters who are six and two years of age.

Dr. Bruce F. Howar closed his general practice in Webster City on June 20, and is to begin work as a member of the staff at the Veterans Administration Center in Cheyenne, Wyoming, on July 1.

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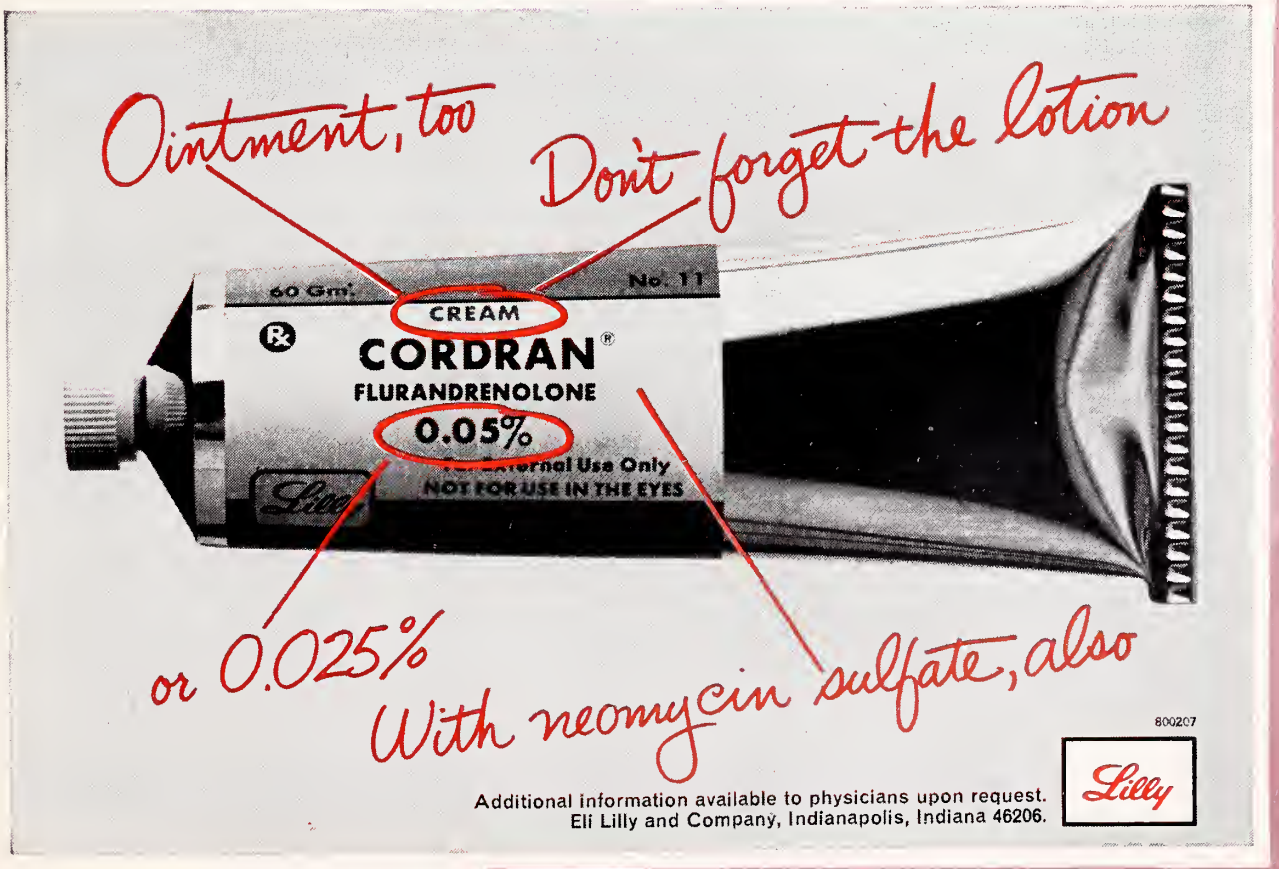
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IN THIS ISSUE:

- Bleeding Disorders in Children: Diagnosis and Management—Andre D. Lascari, M.D., Iowa City
- Human Complement: A Concise Survey of Recent Advances and Possible Clinical Applications—Andrew B. Weiss, M.D., Iowa City
- Look for an Increase of Organophosphate Poisonings in Iowa—J. L. Garred, M.D., Whiting
- Two Statements Published With the Approval of the Council of the American Psychiatric Association—Psychiatry and Mental Retardation
- University of Iowa College of Medicine—Clinical Pathologic Conference No. 500—Oliguria, Uremia, Fever, Positive Papanicolaou Smear



AUGUST, 1968

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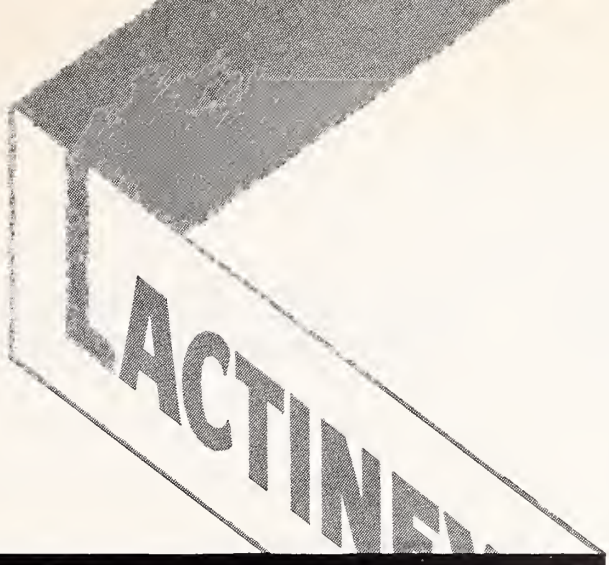
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(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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Vol. LVIII August, 1968 No. 8

CONTENTS

The Relationship Between Organized Medicine and Blue Shield
Alvin J. Ingram, M.D., Memphis, Tennessee . 823

SCIENTIFIC ARTICLES

Bleeding Disorders in Children: Diagnosis and Management
Andre D. Lascari, M.D., Iowa City 831

Human Complement: A Concise Survey of Recent Advances and Possible Clinical Applications
Andrew B. Weiss, M.D., Iowa City 838

Look for an Increase of Organophosphate Poisonings in Iowa
J. L. Garred, M.D., Whiting 841

Psychiatry and Mental Retardation—Two Statements Published With the Approval of the American Psychiatric Association 845

University of Iowa College of Medicine Clinical Pathologic Conference No. 500 (Oliguria, Uremia, Fever, Positive Papanicolaou Smear) 854

EDITORIALS

Desiderata 864

Tell It Like It Is 864

The Physician and Traffic Safety 865

SPECIAL DEPARTMENTS

Coming Meetings 815

Month in Washington 818

President's Page 830

Journal Book Shelf 871

Doctor's Business 873

In the Public Interest facing page 874

Drug Letter 875

State Department of Health 878

Woman's Auxiliary News 882

Iowa Association of Medical Assistants 889

Personals 893

Deaths. 901

MISCELLANEOUS

Ambulances, Not Helicopters, Right for Iowa . . 872

Health Careers Recruiting Materials Are Still Available in Iowa 874

Should You Deed Your Body to Medical Science 874

Bubble Baths Cause Irritations of Urinary Tract in Children 888

Advisory Council on Comprehensive Health Planning Appointed 888

On the New Iowa Law Regarding Prescriptions . 902

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COMING MEETINGS

IN STATE

Sept. 11 — **Meeting of Iowa Chapter of American Academy of Pediatrics, University of Iowa College of Medicine,** Iowa City.

Sept. 11-12 — **Postgraduate Course in Pediatrics, University of Iowa College of Medicine,** Iowa City.

Sept. 20-21 — **Postgraduate Course in General Practice, University of Iowa College of Medicine,** Iowa City.

Sept. 28 — **15th Annual Internal Medicine Symposium,** Ralph L. Jester Auditorium, Iowa Methodist Hospital, Des Moines.

CONTINENTAL U. S.

Aug. 1-3 — **Postgraduate course in Dermatology sponsored by University of Colorado School of Medicine,** Aspen.

Aug. 5-8 — **Postgraduate Course in Pediatrics, University of Colorado School of Medicine,** Aspen.

Aug. 11-15 — **National Medical Association,** Shamrock-Hilton, Houston.

Aug. 12-16 — **Postgraduate Course in Internal Medicine, University of Colorado School of Medicine,** Estes Park.

Aug. 15-17 — **Rocky Mountain Radiological Society,** Brown Palace Hotel, Denver.

Aug. 15-17 — **Big Sky Medical Pow Wow sponsored by Cascade Medical Society,** College of Great Falls Campus, Great Falls, Montana.

Aug. 18-20 — **American Society for Pharmacology and Experimental Therapeutics, University of Minnesota,** Minneapolis.

Aug. 22-24 — **West Virginia State Medical Association,** Greenbrier, White Sulphur Springs, West Virginia.

Aug. 22-24 — **Cancer Chemotherapy '68, Eighth Annual National Cancer Conference sponsored by University of Wisconsin Medical School,** Park Motor Inn, Madison.

Aug. 22-24 — **Workshop Entitled, Exercise as a Therapeutic Tool in Coronary Heart Disease, sponsored by University of Wisconsin Medical Center and Department of Physical Education,** Madison.

Aug. 24-29 — **8th International Congress of Gerontology,** Sheraton Park and Shoreham Hotels, Washington, D. C. and Baltimore.

Aug. 25-30 — **Flying Physicians Association,** Tan-Tar-A, Osage Beach, Missouri.

Aug. 27-30 — **Wyoming State Medical Society,** Jackson Lake Lodge, Moran.

Sept. 13-14 — **American College of Physicians, Wisconsin Regional Meeting,** University Hospitals, Madison.

Sept. 14-15 — **Annual Fall Meeting, Wisconsin Society of Anesthesiologists,** Lake Geneva, Wisconsin.

Sept. 18-20 — **Sixth National Cancer Conference,** Denver Hilton Hotel, Denver.

Sept. 22-25 — **Annual Meeting of Washington State Medical Association,** Olympic Hotel, Seattle.

Sept. 22-27 — **Michigan State Medical Society,** Sheraton-Cadillac Hotel, Detroit.

Sept. 23-28 — **American Fracture Association,** Hotel America, Houston.

Sept. 24-27 — **Kentucky Medical Association,** New Convention Center, Louisville, Kentucky.

Sept. 26-29 — **Metabolic Basis of Heart Disease,** Wayne State University School of Medicine, Detroit.

Sept. 27 — **Great Plains Heart Association Symposium,** Sheraton Ritz, Minneapolis.

Sept. 30-Oct. 1 — **28th Annual AMA Congress on Occupational Health,** Waldorf-Astoria, New York.

Sept. 30-Oct. 4 — **Hospital Medical Staff Conference,** YMCA Conference Center, Estes Park, Colorado.

ABROAD

Aug. 5-10 — **22nd Assembly of World Medical Association,** Sydney, Australia.

Aug. 5-10 — **Asia-Pacific Academy of Opthalmology, (3rd) Congress,** Singapore.

Aug. 12-17 — **International Congress on Mental Health,** London.

Aug. 19-28 — **International Genetic Congress,** Tokyo.

Aug. 26-29 — **Second Western Hemisphere Nutrition Congress (Co-sponsors: American Institute of Nutrition; Latin American Nutrition Society; Nutrition Society of Canada),** Americana Hotel, San Juan, Puerto Rico.

Aug. 31-Sept. 8 — **International Symposium and Seminar on Cerebral Palsy,** Hong Kong.

Sept. 28-Oct. 3 — **Joint Meeting of International College of Surgeon's Two Western Hemisphere Federations,** Honolulu, Hawaii.

Wisconsin Internists Plan Scientific Meeting

Internal Medicine specialists in Wisconsin will hold a scientific meeting in Oshkosh, September 13-14, under the auspices of the American College of Physicians (ACP).

The session, to be held at The Pioneer, is one of 33 scientific-educational meetings which the ACP sponsors during the academic year. Held throughout the United States and Canada, the meetings help the College's 14,300 members keep abreast of developments in basic sciences and clinical medicine. The meeting is under the general direction of J. Leroy Sims, M.D., Madison, Wisc., a professor of Medicine at the University of Wisconsin Medical School, and ACP Governor for Wisconsin.

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The Month in Washington

Washington, D. C.—President Johnson designated the Secretary of Health, Education and Welfare, Mr. Wilbur J. Cohen, as the chief federal official for health policies and programs.

And the HEW reorganization plan, recommended by Mr. Cohen and approved by Mr. Johnson, makes the secretary:

1) The President's chief adviser on federal health policy and programs.

2) The individual responsible for coordinating all federal health programs.

3) Head of a new Federal Interdepartmental Health Policy Council.

The reorganization also included creation of a Consumer Protection and Environmental Health Service as a unit of the Public Health Service, and transfer of the Division of Regional Medical Programs from the National Institutes of Health to the Health Services and Mental Health Administration.

Mr. Johnson also agreed to renew his request to Congress to raise the status of HEW's principal health officer, now Dr. Philip R. Lee, from assistant secretary to under secretary for health and science.

The new Consumer and Environmental Health Unit consists of:

—The Food and Drug Administration;

—The National Center for Air Pollution Control;

—The National Center for Radiological Health;

—The National Center for Urban and Industrial Health;

—Certain staff units of the Office of the Director, Bureau of Disease Prevention and Environmental Control.

Mr. Charles C. Johnson, Jr., a Negro who is assistant commissioner for health for environmental health in New York City, was named to head the new unit. An engineer, he had been on leave from the Public Health Service and his new post makes him the highest ranking Negro official in the history of the USPHS.

Dr. Herbert L. Ley, Jr., who had been director of the FDA's Bureau of Medicine since the fall of 1966, was appointed to succeed Dr. James L. Goddard as commissioner of food and drugs. Dr. Ley, 44, had been recommended by Dr. Goddard, and also had the support of a number of Senate and House members on committees concerned with the FDA. A 1946 graduate of the Harvard Medical School, Dr. Ley was on the faculties of his alma mater and of George Washington University School of Medicine earlier in his career. He also has served as chief of medical branches of the Army research office and the office of the Army Surgeon General.

The Interdepartmental Health Policy Council will oversee all federal activities in the health field such as the drafting of physicians for service with the Armed Forces, Veterans Administration hospitals, and Office of Economic Opportunity health projects.

Mr. Cohen said that in the past there had been no way for the HEW secretary to give guidance in such matters. He said there must be a reexamination of the practice of drafting physicians to provide care for civilian dependents of military personnel at installations here in the U. S. "This allocation of a portion of the critically scarce physician pool materially affects programs intended to make health care as widely available as possible—a national health goal that goes far beyond the mission of the Department of Defense," Mr. Cohen said.

As Medicare went into its third year, Mr. Cohen announced the appointment of a 12-member advisory council to study the possible extension of the program to disabled persons under age 65. Congress last year turned down the Administration's request for such an extension, but authorized creation of a council to study the matter.

In discussing Medicare, Mr. Cohen said rising health-care costs had made financing of the program a serious problem. He said new financing, presumably a tax increase, may be required if costs continue to rise. "Physicians must act with restraint on fees or people will ask government to put on controls," he said. "I would not like to see that."

Dr. Henry H. Kessler, director of the Kessler Institute for Rehabilitation, in Newark, N. J., was named chairman of the advisory council. The other members are Dr. Morris Brand, medical director of the Sidney Hillman Health Center; Mr. James Brindle, president of the Health Insurance Plan of Greater New York; Mr. James M. Gillen, director of personnel research for General Motors; Dr. Juanita Kreps, an associate profess of economics at Duke University; Dr. Leonard W. Larson, a past-president of the American Medical Assn.; Mr. Daniel W. Pattengill, vice president of Aetna Life and Casualty Co.; Mr. Bert Seidman, director of the AFL-CIO social security department; Mr. E. A. Vaughn, vice-president of the Aluminum Company of America; Mr. Anthony G. Weinlein, executive assistant to the president of the AFL-CIO Building Service Employes Union; Mr. E. B. Whitten, executive director of the National Rehabilitation Assn.; and Dr. Alonzo S. Yerby, a professor at the Harvard School of Public Health.

(Continued on page 819)

(Continued from page 818)

The American Medical Association told Congress it supported most provisions of the Administration's health manpower bill as essential to increasing enrollment in the nation's medical schools. The AMA position was outlined by Dr. William A. Sodeman of the AMA's Council on Medical Education in testimony before the House Public Health and Welfare Subcommittee. Dr. Sodeman noted that in a recent joint statement the AMA and the Association of American Medical Colleges had said that more funds from both government and private sources would be needed by medical schools if they were to expand enrollment.

"The bill (H.R. 15757) before the Subcommittee provides a means of furnishing the federal component of the necessary financial resources," Dr. Sodeman said.

In other testimony, the AMA supported the overall objectives of the Administration's occupational health bills (S 2864). But it opposed a provision that would authorize establishment and enforcement of mandatory national standards for health and safety.

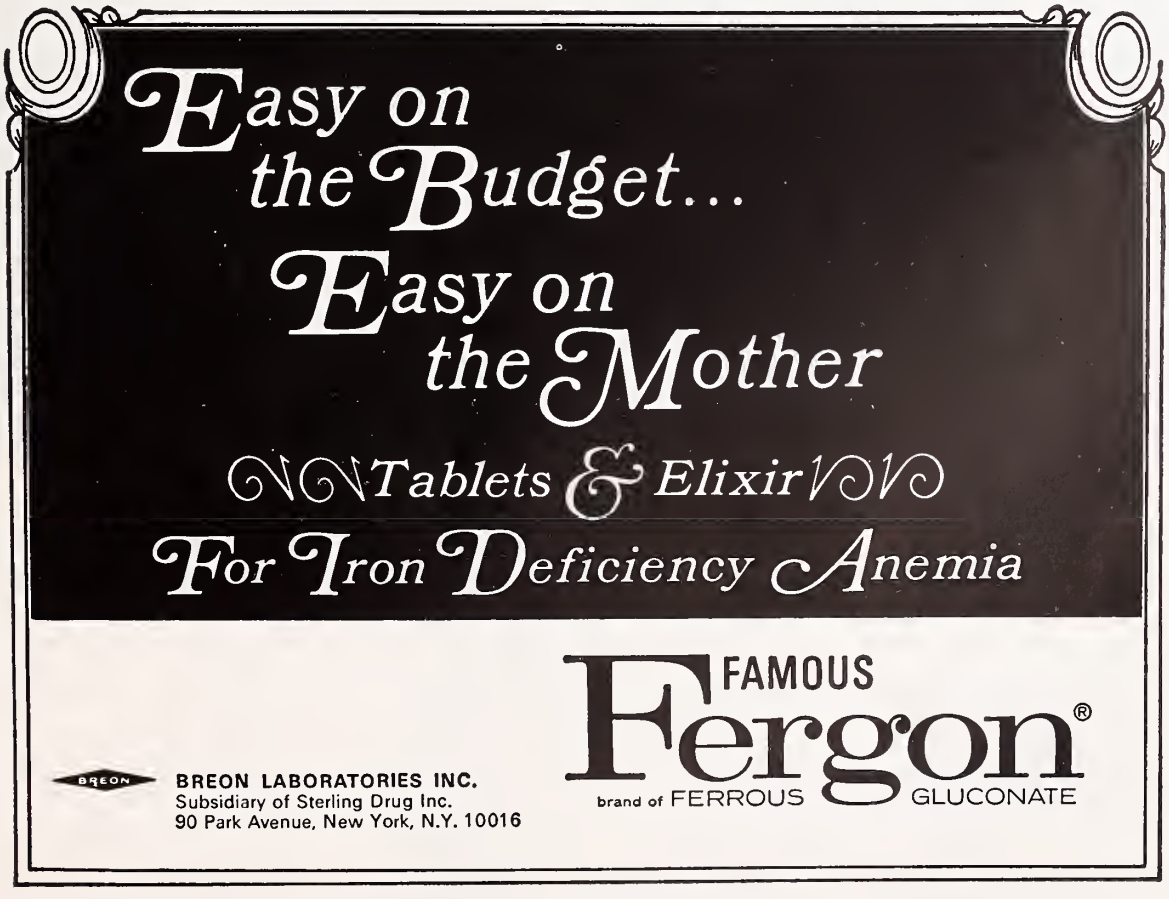
Dr. R. Lomax Wells, chairman of the AMA Council on Occupational Health, told a Senate Labor Subcommittee, that the objectives of the bill could "best be accomplished through the research, education and training provisions, and through grants to states to enable them to undertake and conduct more effective programs in both occupational health and safety." Urging rejection of the mandatory-standards provision, Dr. Wells said that this authority has been "properly vested in the states, where the standards and the enforcement can be adapted to their particular geographical and industrial conditions."

* * *

The U. S. Supreme Court refused, by a 5-4 vote, to lay down a constitutional rule against punishing chronic alcoholics for being drunk in public. In an opinion written by Justice Thurgood Marshall, four members of the Court said that neither the facts of the test case nor "the comparatively primitive state" of scientific knowledge on the subject justifies such a decision at present.

The vote of the four, plus Justice Byron R. White, who concurred separately, upheld the conviction of Mr. Leroy Powell, 67, who had been fined $50 in a Travis County, Texas, court for being drunk in public. The argument on behalf of Mr. Powell was that alcoholism is a disease and that the person suffering from it should be treated, rather than punished.

Two AMA authorities on alcoholism expressed surprise and disappointment at the court's decision. Dr. Marvin Block, of Buffalo, N. Y., a member and former chairman of the AMA's Committee on Alcoholism and Drug Abuse, and Dr. Dana L. Farnsworth, of Harvard University, chairman of the AMA Council on Mental Health, took issue with the majority's opinion that said, "We are unable to conclude . . . that chronic alcoholics in general . . . suffer from such an irresistable compulsion to drink and get drunk in public . . . that they are utterly unable to control their performance. . . ."





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Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.
Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reacti-

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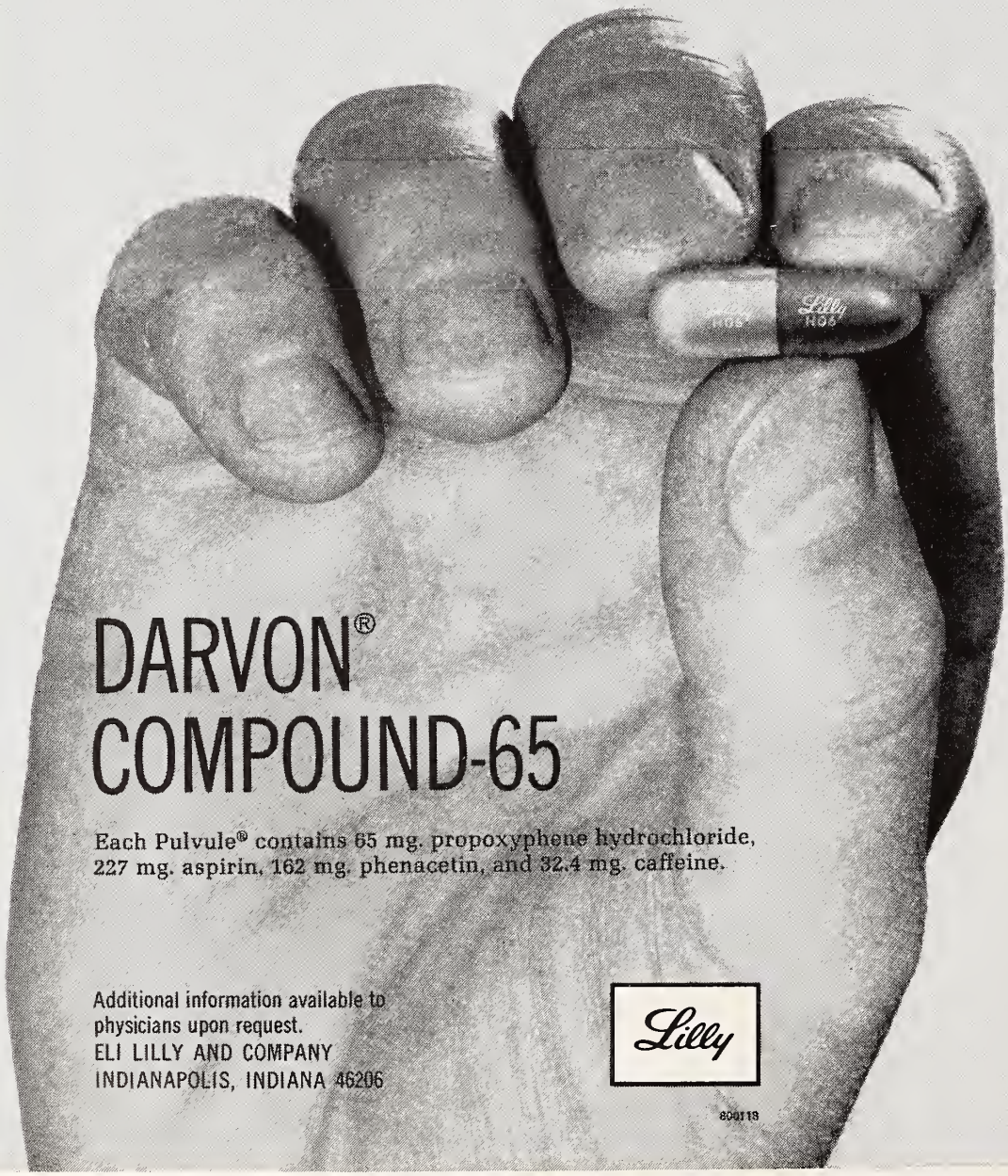
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The Relationship Between Organized Medicine and Blue Shield

ALVIN J. INGRAM, M.D.
Memphis, Tennessee

THE BLUE SHIELD PLANS have done a tremendously valuable job for the citizens of this country as well as for the physicians of this country. I shall briefly review the history of the relationship between medicine and Blue Shield, and I shall attempt to enumerate some of the more important problems which we as physicians and as interested participants in the Blue Shield movement must face and solve if the practice of medicine is to remain in the control of the private sector of our society.

VOLUNTARY HEALTH INSURANCE HAS SERVED AMERICA WELL

The Health Insurance Council bulletin which describes the performance of the health insurance industry through 1966, the latest year for which complete figures are available, indicates that of the population under 65 years of age, 149 million citizens are covered against hospital expenses; 137 million against surgical expenses; and 110 million against regular medical expenses. Those numbers show that 85 per cent of the people under 65 have hospitalization coverage, and that 82 per cent of them have surgical-expense coverage. Approximately 60 per cent of their coverage is provided by the private insurance companies, and 40 per cent by Blue Shield and Blue Cross. Major-medical coverage, which has tripled in the past 10 years, continues to increase at a dramatic rate. In 1966 there were 55 million people with that type of insurance, 10 per cent more than the number in 1965, just one year earlier. There are increasing numbers of policies being written to cover drug, nursing-home, extended-care-facility, dental and many other benefits. Loss-of-income protection is now carried by 54 million people.

As a measure of the effectiveness of the insurance that is in force, it is my understanding that 80 per cent of hospital and 80 per cent of surgical charges experienced by insured persons were covered by the policies that they carried. Thus as measured by any parameter, the voluntary health insurance movement continues to perform a spectacular service for the citizens of this country. As the central figures in the whole system, we physicians can be proud of the role which we have played, for in effect the entire health insurance system is based on the integrity and the responsibility of the medical profession. Blue Shield can be proud of the tremendous contribution which it has made in the past and is making today.

THERE IS A CONTINUED NEED FOR BLUE SHIELD

Despite these evidences of success, we see signs that indicate we have not as yet reached the millennium. Things could be better with Blue Shield and organized medicine. For instance there is evidence that relations between Blue Cross and Blue Shield, especially at the national level, leave something to be desired. Blue Cross has recently sought a federal grant to perform a study in an area of acute interest to Blue Shield. That application was submitted not only *without* the consent of Blue Shield, but in fact *against* the advice of Blue Shield. Regardless of the outcome of that study, the fact remains that the first results of it have been some bruised relations in several quarters. There is evidence that at least in some geographical areas there are problems between Plans and their participating physicians, and in some places physicians prefer to deal with private carriers rather than with Blue Shield. Then too, the government now assumes responsibility for payment for medical care to needy individuals and for some others regardless of need. Thus there appears little need for physicians to render "service benefits." Finally, some say that since Blue Shield and Blue Cross are openly competitive with the private carriers, and since they render no greater public service than do the private companies,

their tax-exempt status is no longer justified. The question is whether Blue Shield has any unique characteristics in relation to other forms of voluntary insurance which are beneficial to society. Is it worth the effort by the physicians to keep it alive, healthy and thriving in the future? In my opinion Blue Shield has contributed and does contribute uniquely to society, and that its past performance justifies our continued efforts on its behalf.

In the first place, Blue Shield is a going concern, and it could not be stopped without producing a severe jolt for many people. In 1966, there were 58 million people who paid premiums to Blue Shield, and 71 million received some sort of service from Blue Shield. Either of those numbers represents more than a third of our population, and the total of the premiums they paid represents 1.4 billion dollars in cash outlay. Further, those people sought their coverage with the implied encouragement and support of the medical profession—in the belief that Blue Shield is "the doctors' plan." It would be a breach of faith with those people if the medical profession were suddenly to withdraw its support of Blue Shield. Certainly then, on the basis of sheer numbers of people concerned and sheer number of dollars spent, Blue Shield should be perpetuated.

Second, Blue Shield has been the innovating group, by tradition. Its performance record has been good, it has tended to lead the entire industry in new thinking and innovation, and we need all the know-how and imagination possible in these times.

Blue Shield, as well as Blue Cross, has consistently returned a significantly higher percentage of the premium dollar to the policyholder in the form of benefits than have other carriers, even after their tax relief has been considered.

Blue Shield has served as the yardstick with which to measure the efficiency and effectiveness of the other members of the health insurance industry.

Another point is that Blue Shield has been more responsive to the collective voice of medicine at the local, state or national levels than has any other insuring mechanism.

The policies which Blue Shield has pursued, especially at the national level, are those which it has thought to be consistent with the policies and long-range best interest of the medical profession and of the AMA.

At the present time possibly the most important reason that Blue Shield should be retained is that we presently face a serious challenge, and need all the intelligence, know-how and experience that we can muster to meet that challenge. Dr. Rouse, in testifying before the Senate Finance Committee regarding the Medicare amendments in 1967, suggested that Congress should realize and should admit that the foundation upon which the Medicare Law was passed was defective, and that it should seek changes in the Law. He suggested that the government should seriously consider developing a program which would assist needy people in purchasing comprehensive health insurance. The amount of assistance needed would be determined by an income-tax study. The citizen could receive full assistance, partial assistance, or none, depending on his particular circumstances both financial and social. The form of government assistance could be either an income-tax forgiveness, an income-tax rebate or a cash grant. Such a proposal merits the thoughtful consideration of leaders in the health insurance industry, of government and of the medical profession. Certainly Blue Shield could make a significant contribution to the solution of this or any other similar problem in which organized medicine requests its assistance.

For these and for many other reasons, we physicians need to recognize the need for closer relations between Blue Shield and organized medicine at all levels, and for working harder to see that they become a reality.

A BRIEF HISTORY OF BLUE CROSS AND BLUE SHIELD

In reviewing the history of Blue Shield, I shall also touch on some of the high points of the history of Blue Cross, for purposes of comparison. The Blue Cross movement had its inception in 1929, and it continued as a commission or a committee of the American Hospital Association for many years. Its purpose was to reimburse hospitals for the expense of serving covered beneficiaries, and to improve the hospitals' ability to collect for services rendered.

In 1960, the American Hospital Association took a dual action regarding the Blue Cross movement. In the first place the Blue Cross

Commission was dissolved and a National Board of Directors of Blue Cross was established. An intimate relationship has continuously existed between that Board of Directors and the Board of Directors of the American Hospital Association, five members being common to both Boards.

The second action was the appointment of a Council on Blue Cross within the organizational structure of the American Hospital Association. One-half of the members of that Council represent the American Hospital Association and one-half represent Blue Cross. The purpose of the Blue Cross Council is to maintain free the copyright of the organization and to maintain approval programs for hospitals in their dealings with Blue Cross.

Although this is a condensed version of Blue Cross history, it does appear that the American Hospital Association has been able to represent its member institutions fully in dealings with Blue Cross, and indeed it has been in position, if it desired, to control the policies of Blue Cross. It has consistently supported Blue Cross and has promoted it as the preferred mechanism for insuring against the expense items covered by Blue Cross benefits.

The relationship between medicine and Blue Shield has not been so intimate, nor so mutually supportive through the years. In fact one occasionally hears statements and observes actions of members of the medical profession which are openly critical of Blue Shield.

Now let me recount some of Blue Shield's history. In 1919 the American Medical Association's Commission on Social Insurance first discussed the idea of establishing groups for the purpose of prepaying health and hospital expenses.

In 1933 the AMA's House of Delegates adopted the following principles on health insurance:

1. Professional medical services should be controlled professionally.

2. Freedom of choice of physician should be maintained.

3. Confidential relationships between patient and physician must be maintained.

4. Hospitalization and medical services should be separated and covered separately from an insurance standpoint.

5. The cost of the premiums should be related to the income of the patient.

In 1938, the AMA House of Delegates approved the concept of cash-benefit payments.

In 1939, California Physicians' Service organized the first Blue Shield movement, and it has continued to be a trail-blazer in this entire movement.

In 1942, the concept of service benefits was approved by the AMA House of Delegates.

In 1943, the AMA House of Delegates formed the Council on Medical Service. Its purposes were to study, to develop and to promote voluntary prepayment health insurance.

In 1946, the Council on Medical Service formed the anlage that was ultimately to develop into the Blue Shield Association.

In 1948, National Blue Shield was organized. It consisted of nine Plans which underwrote the health-benefit coverage for less than two million people.

In 1949, the House of Delegates officially separated AMA from Blue Shield, and the latter became a separate and independent legal and corporate structure.

In 1961, the House of Delegates advocated the formation of a Joint Commission for the Promotion of Voluntary Nonprofit Health Insurance, composed of three representatives each from the AMA, the American Hospital Association and Blue Shield and Blue Cross. The Joint Commission has served as a forum for the discussion of mutual problems and for the promotion of coverage by Blue Shield and by Blue Cross. Although I cannot speak for the actions of the Commission in its earlier years, I do have the feeling that in the past three years or so it has accomplished very little that is visible to an interested observer and Commission member. That fact is doubly regrettable when one considers the many changes which are occurring at this particular time, each of which increases the need for communication between those of us who render services and those who pay for them. I do not attempt to fix blame for the lack of success on the Commission, nor do I plead for its continuation as such. I do see a need for some forum to serve the purposes for which the Commission was formed, and I suggest that we revitalize the Commission or develop a different instrumentality to serve its purpose.

In 1965, the American Medical Association suggested to the National Association of Blue Shield Plans that Blue Shield assume "an im-

portant role" as an intermediary in dealing with Part B of the Medicare Law. I need not detail here the tremendous Blue Shield effort and the excellent results obtained despite difficult, confusing and frustrating circumstances.

THE PRESENT RELATIONSHIP BETWEEN BLUE SHIELD AND ORGANIZED MEDICINE

Currently, relationships at the national level are good, and are based on several formal and innumerable informal arrangements for communication and action.

The Board of Directors of the National Association of Blue Shield Plans grants the American Medical Association the right to appoint five members of its Board. The Board of Trustees appoints three of them, and the Council on Medical Service appoints two. In addition, each of the eleven regions must appoint a physician to the National Board. The regions must also appoint an administrative officer to serve on the Board, and he may or may not be a physician. The "at large" members of the Board may also be physicians.

Thus approximately one-half of the NABSP Board members are physicians, and five are official representives of the American Medical Association at its innermost levels. The members of the Council on Medical Service serve as liaison between the NABSP and the Council, while the representatives from the Board attempt to maintain an open channel of communication at the Board level.

Another important communication point is at the level of the AMA and Blue Shield staffs. Excellent, harmonious and cooperative attitudes exist throughout the entire staff structures of both organizations. Good spirit and mutual appreciation of valuable contributions by each worker to the common effort are possibly the best basis for a constructive relationship at all levels. I believe that this situation exists in the staffs of both organizations.

At the 1967 AMA Clinical Convention in Houston, the AMA House of Delegates pointed with pride to the notable accomplishments of Blue Shield, expressed the feeling that good relations are especially necessary at the local level at this time, and suggested the establishment of a joint committee to pursue those ends. The Committee subsequently established is composed of three members of the House of Delegates and three members of the National Board of Blue Shield, and its purpose is to improve and facilitate the relations between local Plans, their participating physicians and the patients whom they serve, to the end that the superiority of the voluntary system will be apparent to all.

I have thus briefly summarized the relationship between the AMA and the NABSP. The policy of the AMA is not to grant preferential recognition or treatment to Blue Shield, but rather to grant the same degree of approval and support to all members of the health insurance industry. Thus the AMA has been in a position to exert some influence on Blue Shield policy, and although physicians can exercise a certain degree of control over the organization, Blue Shield has not been given the physicians' exclusive or even their preferential support as a mechanism for health insurance.

BLUE SHIELD HAS MANY UNSOLVED PROBLEMS AND UNANSWERED QUESTIONS

Despite these evidences of good relations between organized medicine and Blue Shield at the national level, signs of strain are beginning to appear at several places along the line. Some of the causes for this strain can be controlled by our cooperative efforts, some can be modified, and in some instances we have little control over the problems which we face.

The most important difficulty which we all face at the present moment is the skyrocketing cost of medical care, and especially of hospital expenses. The rapid rise in cost makes it increasingly important that the public have greater dollar coverage, that the benefits include a greater number of items, and that the benefits be available when and where they are needed, regardless of the geographical situation of the insured at the time illness or accident strikes him. The average citizen in our "charge-account economy" has little or no ready cash saved or otherwise immediately available to him. When his income is suddenly cut off by illness or injury and he is suddenly faced with the need to pay the high cost of health care, he is immediately placed under a severe economic strain. His best protection is the insurance mechanism, and in my opinion the best insurance is the private and voluntary variety.

For health insurance to be truly effective

however, it must offer a broad spectrum of benefits, it must give sufficient dollar protection, and it must be utilized properly.

By now we should all realize that, ideally, services should be available to the patient at the point of his need. We must also have learned that if "the insurance" will pay for tests when the patient is in the hospital but not otherwise, then the patient has a clear incentive to be hospitalized, and many patients will pressure their physicians into admitting them for such studies. On the other hand, if the insurance industry pays for diagnostic, laboratory and x-ray services on outpatients, it must have assurance that the procedures have actually been done, that they were medically indicated, and that they were in the patient's best interests. The most acceptable method of providing such assurances would be through evaluation by physicians at the local level. We in organized medicine must accept this as a challenge, and must come up with a workable system in this respect.

For utilization control to be truly effective, then, there is an essential role for the physician, the hospital and the patient. The physician should be as free as possible of rules, regulations, "incentives" and other coercive devices, and should be permitted and encouraged to prescribe the measures and treatments which are in the best interest of the patient. He has the responsibility to see that the needed measures are ordered, and that only those which are medically indicated are prescribed. He needs to know and to use the full spectrum of health services available to his patients, and he must assume his keystone role in the conservation of the patient's health-care dollar.

The hospital has an especially great responsibility to the health insurance industry and to the public because of its taking the largest share of the health-care dollar, because of the size of the bill that is customarily presented to the patient at the time he leaves the hospital, and because of the increases in hospital charges which have been occurring in recent years.

It has been said that competitive forces tend to work in reverse, as far as hospitals are concerned. Instead of open and free competition to render maximum services or goods for minimum dollar cost, competition between hospitals takes the form of rivalry to build the largest and most beautiful physical plant with the most modern and expensive gadgetry, and to furnish the most sophisticated and exotic facilities and services. Expensive and infrequently-used equipment such as cobalt machines, betatrons, heart pumps and similar devices tend to become status symbols. That last statement is, of course, an exaggeration, but it is one that we sometimes hear, and it reflects a criticism that has some validity. The fact is that hospitals do have an impelling responsibility to exercise maximum restraint in their administrative practices and to see that quality service is provided at the least possible cost to the patient and that the amounts charged the patient bear a direct relationship to the cost of providing service. In their construction as well as in their amortization programs, hospital administrators should bear in mind that hospital buildings become obsolete after just 20 years, and probably hospitals would better fulfill their continually changing role by replacement of buildings rather than by modernization every 20 to 25 years.

The patient has a most important role in medical and facility utilization, and because he has not been properly educated concerning either the system or his role in it, he has a very inadequate perception of that role. The patient needs to understand that insurance does not create wealth; it merely redistributes it. He needs to have a feeling of personal responsibility, of real stewardship toward the benefits that are available to him. He should be given to understand that deductibles and coinsurance are devices the purpose of which is to bring him into the utilization-control mechanism. His assistance in cost control should be sought.

In summary, then, utilization of health-care benefits requires a clear identification of the roles of the physician, of the hospital, of the insuring mechanism and of the patient. Only through the coordinated efforts of those four groups can we be certain of optimum and ideal utilization of health-care facilities. We all must do our parts in fighting increases in cost.

Another important subject is the change in "ground rules" under which we have all been working during the past few years. Blue Shield was originally organized on the concept that substandard fees should be charged to people who had substandard incomes, and that service benefits should be provided to people

whose incomes were limited. It now appears that those two basic concepts may have become outmoded, since the federal government is assuming responsibility for assuring first-class medical care to all citizens. Payment of usual and customary charges is becoming the accepted pattern. For this system to work, an effective policing mechanism must be developed, and indeed it appears to be evolving at present.

The institutionalizing of the delivery of medical care is another factor. Many things have contributed to this change, especially the technological changes in the practice of medicine. Laboratory tests, x-ray procedures and other technical services routinely establish the diagnosis, and the diagnosis then forms the basis for a rational treatment program. The institution which houses those services assumes an increasingly important role with the public and with the medical profession. Sociologic changes such as urbanization of the population, mobility of the population and other factors have contributed, as well. For many reasons, more and more people tend to go to hospital emergency rooms and outpatient clinics to receive their medical care.

The institutional orientation of more and more physicians has likewise contributed to the problem. Within the past few years it has become common for a hospital to employ physicians not only to work in the x-ray and laboratory departments, but to act as directors of medical education, to render professional services to outpatients, to staff emergency rooms, to read electrocardiograms and to perform many other functions. Several concepts at stake here are of great long-range interest to the physician, such as the fee-for-service concept and the corporate practice of medicine. Indeed the roles and responsibilities of the hospital and of the medical staff need to be clearly restated. As far as Blue Shield and Blue Cross are concerned, the situation brings into sharp focus the specific aims and aspirations of Blue Shield and Blue Cross. Shall they be openly competitive? Shall one write hospital and the other write medical-care benefits? And finally, exactly where is the dividing line between those two?

Finally, there is evidence of strain in some of the local Plans. In a number of instances the idea of physician control of the policies of Blue Shield is being strongly contested. Boards of directors are being opened to include considerable numbers of consumers, such as representatives of labor and management, politicians and members of the public at large. In some localities Blue Shield programs apparently thrive despite the fact that they do not have medical society sponsorship or board representation. An objective study of many local Plans indicates that some are overly dependent upon their respective companion Blue Cross Plans, not only as far as administrative staff is concerned, but also as regards their boards of directors, the policies which they pursue and the hierarchy of loyalties which they exhibit. In many instances Blue Cross appears to be the stronger and more viable member of the partnership.

Assuming that the Blue Cross-Blue Shield movement is worthy of our endorsement and support, and recognizing the facts of life as we perceive them today, what can we, as physicians and responsible members of the medical community, do to further the aims and purposes of Blue Shield? First of all, I believe we must identify the role that we think appropriate and proper for Blue Shield. Is it to offer coverage for professional medical services alone, or is it to offer coverage for hospital benefits, drugs, ambulance delivery, and dental and other services? Certainly if we believe that Blue Shield should offer services in all of these peripheral areas, then it is unseemly for us to object when Blue Cross offers professional medical services in competition with Blue Shield.

"What would be the optimum relationship between Blue Shield and the medical profession at the local, the regional and the national levels?" "What are the optimum relationships between Blue Shield and Blue Cross at the local and national levels?" "What relationship should Blue Shield have with the government at the local, state and federal levels?" Questions such as these must be faced, so that goals can be acknowledged and coordinated efforts can be started toward attaining those goals.

After we have identified the role that we think appropriate for Blue Shield, it is important for us to identify the obstacles which stand between Blue Shield and the attainment of its announced objectives. Certainly one of the basic obstacles is that although many of

the local Plans conform to the current interpretation of the letter of the law, in many instances they do not comply with the spirit of the law, especially with regard to their relationship with the local medical communities. In my opinion, the law should be made realistic and specific—by change if necessary—and the Plans should be required to conform to the law.

A second weak point in the Blue Shield system is the diffusion of power within the organization. Although I am fully aware of the dangers of an excessive concentration of power at the center of an organization, I also realize that if Blue Shield is to be competitive it must offer nationwide benefits and it must develop interests and programs aimed at meeting needs that exist throughout the nation, and in a population which is highly mobile. Maximum authority must always reside in the local Plans, not only as regards providing the benefits but also as regards establishing the nationwide policies of the Association. Then the Plans must delegate sufficient authority to the central governing group of Blue Shield so that it can implement the stated policies and permit the organization to compete and to innovate on the national scene as readily as it has done on its multiple local fronts in the past.

CONCLUSION

On the record of its performance, then, Blue Shield merits the support and the participation of the physicians of the United States. I suggest that we put our shoulders to the wheel and assist Blue Shield in helping the medical profession meet the health-care needs of society.

We need to give the organizations dependable, objective and constructive assistance in carrying out their programs. Certainly our common aim and purpose is to see that the highest quality of medical care is available and accessible to all of the citizens of this country at reasonable cost. That is our common and mutual aim—the desired endpoint of our actions. I suggest that all of us keep our eyes on that objective, and that we attempt to offer encouragement to all others who share those aims and are willing to help us attain that objective.



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President's Page



In all discussions pertaining to the cost of medical care especially when carried on by economists and social planners, one hears much reference to "group practice." Even some of our medical leaders have taken to parroting this term.

We are all familiar with group practice as exemplified by the large multi-specialty fee for service groups represented by the Mayo Clinic down to the smaller group seen in almost every community in Iowa. These are all strictly fee for service, private practice with free and complete choice of physician.

Is this what the social planners are talking about? I think not. When they speak of "group practice" they are thinking in terms of a closed panel capitation system, lay controlled with physicians on salary. There is obviously no free choice of physician.

It is entirely possible that in certain areas of our country this type of medical practice may best fill the need. However, to attempt to apply this method of delivering medical care to the American public as a whole, is as logical as trying to fit a company of soldiers with one shoe size.

Let us take a careful objective look at all methods of financing and delivering medical care but also let us know exactly what we are talking about, so that we can choose the one that best fits each individual situation.

C. W. Leibert, M.D.

President

Scientific Articles

Bleeding Disorders in Children: Diagnosis and Management

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Several questions confront the physician who is evaluating a child for a possible bleeding disorder. First, is a bleeding workup really indicated, and if so, how many of the coagulation studies should be done? If one can make a specific diagnosis of bleeding disorder, what is the best current method of management? In this paper I shall discuss these questions with particular emphasis on the management of hemophilia and idiopathic thrombocytopenic purpura.

INDICATIONS FOR A WORKUP

The most important aspect of the initial workup of a child with a possible bleeding disorder is a thorough and concise history. The points specifically to be elicited are (a) bleeding at the time of circumcision; (b) bleeding at the time of initial immunization shots; (c) bleeding at the time of tooth eruptions; or (d) excessive bleeding following operations or injuries. A history of abnormal bruising or the presence of petechiae should be sought, and a thorough family history should be taken for evidence of bleeding disorders.

It is important to emphasize that details of each bleeding episode, such as the duration, the degree of bleeding and the treatment employed are of great importance. Often what a parent reports as a significant bleeding episode may have been entirely within normal limits. Postoperative bleeding of less than 24 hours' duration is very unlikely to have been the result of hemophilia. Often one elicits a history of blood transfusion after bleeding from a tonsillectomy and adenoidectomy, but that does not always mean a blood transfusion was really needed, unless there are records of hemoglobin values to document the magnitude of the bleeding episode.

Significant bleeding at the time of circumcision is seen in only 50 per cent of severe hemophiliacs and in only 10 per cent of mild or moderate hemophiliacs.[1] Therefore a negative bleeding history at circumcision does not rule out the diagnosis of hemophilia. The failure of most hemophiliacs to bleed at circumcision was initially thought to be due to a transfer of factor VIII across the placenta, but it has since been shown that such a transfer to the baby does not occur.[1] It is likely that tissue thromboplastin released at the time of circumcision is the explanation, for it acts through the

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extrinsic clotting system, completely bypassing the deficiency of factor VIII.

Severe bleeding episodes before the age of one year, except at circumcision, indicate a severe bleeding disorder, as does any spontaneous bleeding—i.e., bleeding without preceding trauma. Failure to bleed after a dental extraction of moderate severity or after a T & A usually indicates that the patient does not have a congenital bleeding disorder.[2] Multiple bruises 2 to 3 cm. in diameter are common, and are usually insignificant. Bruises over 6 cm. in diameter, however, are uncommon and have diagnostic value. Deep hematomas with no overlying skin discoloration are uncommon except in coagulation disorders.

Epistaxis is the commonest bleeding complaint in children. If often occurs spontaneously, often at night and frequently at the time of an upper-respiratory infection. The commonest cause undoubtedly is nose-picking, even though the parents may deny it. Epistaxis is rare as the sole symptom of hemophilia, and it is very seldom a problem in hemophiliac patients. If the episodes are not severe, if the child and his family have negative bleeding histories, and if the physical examination is negative, no studies are indicated. A positive bleeding history in the patient or his family, or severe bleeding from the nose justifies a bleeding workup. Easy bruising is an indication for a workup, but one should ascertain that there has been more bruising than one would normally expect to occur to an active child. Hematomas out of proportion to the degree of trauma in protected areas of the body should be viewed with suspicion, as should excessive bleeding from cuts, tooth eruptions or surgical procedures. Any episode of hemarthrosis is strongly suggestive of a coagulation defect, and repeated episodes are virtually pathognomonic.

Thus the indications for a bleeding workup may be summarized as follows:

1. Severe and uncontrolled epistaxis
2. Easy bruising
3. Excessive bleeding from cuts, tooth eruptions, injections, circumcision
4. Any severe life-threatening hemorrhage
5. Hemarthrosis
6. Suspicious bleeding history in a patient with a positive family history
7. Hematomas, particularly in protected areas
8. A bloody subdural hematoma that continues to produce fresh blood after a week of repeated taps.

THE WORKUP

When it has been determined that a workup is indicated, the initial studies should include:

1. *Bleeding time.* This is prolonged in thrombocytopenia and in Von Willebrand's disease. It is normal in hemophilia and other congenital coagulation disorders.

2. *Clotting time.* This is a very crude test in that only when factor VIII is under 1 per cent will it be prolonged, and therefore all mild and moderate hemophiliacs will have normal clotting times as well as normal bleeding times. The clot should be observed for clot retraction and clot lysis, if any.

3. *Prothrombin time.* A prolongation means a deficiency of prothrombin, factors V, VII or X. Presence of a good clot at the end of the test means that there are adequate levels of fibrinogen.

4. *Partial thromboplastin time.* This is an excellent screening test that will be abnormal in the presence of significant deficiencies of any of the clotting factors except factor VII. It is normal in thrombocytopenia, and may be normal if only a mild deficiency of the clotting factors exists.

5. *Smear for platelets.* When the number is greater than six per oil-immersion field, or when the platelets are in clumps, there usually is not a significant thrombocytopenia.

If any of the studies are abnormal except for thrombocytopenia, a thromboplastin generation test, prothrombin consumption test and an assay for factors VIII and IX are indicated. It is best to have them performed in a coagulation laboratory that does these tests and assays frequently. The presence of thrombocytopenia is an indication for a bone-marrow aspiration to rule out such diseases as leukemia, aplastic anemia and idiopathic thrombocytopenic purpura. Screening a possible bleeder by measuring no more than a bleeding and a clotting time is virtually useless, for all but the severe hemophiliacs are missed by those two tests.

TYPES OF CLASSIC HEMOPHILIA

Hemophilia occurs in males whose mothers are carriers of the defective gene on the X chromosome and pass on to them the defective gene for factor VIII (antihemophilic factor). In about 30 per cent of cases there is no family history of hemophilia, and these patients are referred to as "sporadic hemophiliacs." Most of the sporadic hemophiliacs tend to have the severe form of the disease.

The severity tends to be the same in any given family—i.e., if one member of the family has severe disease, the other affected members will also have severe disease. Any male child born into a severely affected family can be considered unaffected if he has displayed no bleeding symptoms before reaching two or three years of age.

Hemophilia can be classified as follows:[3]

1. *Severe*—Factor VIII under 0.5 per cent (normal 50-200 per cent), and frequent spontaneous hemorrhages.

2. *Moderate*—Factor VIII 1 to 5 per cent. Such patients bleed from moderate trauma.

3. *Mild*—Factor VIII between 5 and 35 per cent. Patients bleed from major trauma or surgery.

Knowing the severity of the patient's disease, one often can anticipate whether treatment is initially indicated, and if so, approximately how long the patient will need replacement therapy.

MANAGEMENT

General. The physical environment in the home should be well padded, and the children should not be allowed to play with other youngsters without supervision. Limitations on the physical activity of the older child depends on the severity of the disease. Mild hemophiliacs require no restriction other than those designed to prevent major injuries.

Infants should be kept in cribs lined with foam rubber and surrounded by deep carpeting to cushion any falls. Lowering the height of the crib legs will shorten the distance to the floor. The playpen is similarly padded. Toys with sharp edges should be avoided, and the household should have no coffee tables with glass or metal edges. A toddler who is a severe hemophiliac can wear a football helmet to protect him from scalp hematomas. Tricycle pedals should be carefully padded. As the child grows older, he must avoid contact sports, but he may take part in golf, swimming or sailing, which are usually safe. Older hemophiliacs may be allowed to shave, for their bleeding times are normal.

Common illnesses. These should be handled in the usual manner. Infections of the oral cavity such as pharyngitis, tonsillitis etc., should be watched carefully, since bleeding may be precipitated by the inflammatory reaction in the tissues, and serious bleeding in the floor of the mouth and in the neck can occur.

Medications and immunizations. Intramuscular injections should always be avoided in hemophiliacs, even when they are under replacement treatment. If medications cannot be given by mouth, they can be given rectally, intravenously or, on occasion, subcutaneously. Prolonged use of aspirin may result in gastrointestinal bleeding from local irritative effect on the intestinal mucosa and should be avoided in hemophiliacs. For pain, Darvon can be administered. If gamma globulin must be given, the patient must be covered with cryoprecipitate. Routine immunizations can be given subcutaneously, and smallpox vaccine can be given without any difficulty.

Dental care. It is of paramount importance that continued dental care be provided hemophiliac patients. Careful brushing of the teeth is essential, and a soft brush must be used. Fluoride drops should be added if fluoride is not present in the water supply, and the hemophiliac patient should visit the dentist every three to six months.

Dental-block anesthesia is contraindicated because severe hemorrhage can result, and can spread to the neck and mediastinum. Careful infiltration of local anesthesia around the tooth with a thin needle is feasible. General anesthesia can also be used, or an oral narcotic can be given for analgesia. When a hemophiliac child has a loose deciduous tooth and is bleeding, he should be put on a soft diet to prevent damage to the surrounding gums from mastication. With persistent bleeding from a loose tooth, a dose of cryoprecipitate should be given just prior to the extraction, and continued for two to four days. If the tooth is quite adherent, and extraction would leave a large wound, it is

best to control the bleeding with a short course of cryoprecipitate, and then to keep the patient on a soft diet until the tooth sheds spontaneously.

Head and neck bleeding. Any bleeding into the floor of the mouth, into the neck or into the mediastinum should be considered an emergency, and the patient should be hospitalized immediately and given intensive cryoprecipitate treatment. Bleeding into the lips, tongue and frenulum, or into the gingiva usually requires treatment for seven to 10 days. Any severe hemophiliac who has a headache and vomiting for unknown reasons should be treated as if he were having an intracranial bleeding episode, and any hemophiliac with significant head trauma should be hospitalized and observed for 24 to 48 hours, and given cryoprecipitate treatment.

Soft-tissue and muscle bleeding. A severe hemophiliac who has a soft-tissue swelling a few hours after injury probably will need replacement therapy, for his hemorrhage is likely to progress. If the patient is a mild or moderate hemophiliac, one can observe him before going ahead with cryoprecipitate, for the bleeding may not progress in such a patient. Enclosed soft-tissue bleeding into muscles usually responds readily to short-term treatment with cryoprecipitate, and usually no more than one or two doses are required.

Hemorrhage into the psoas muscle is important for two reasons. First, the femoral nerve may be involved, and second the hemorrhage may be mistaken for appendicitis. An area of anesthesia around the thigh implies that the bleeding is into the psoas muscle, resulting in involvement of the femoral nerve. Bleeding into the psoas muscle may also present with tenderness and pain, and with symptoms identical to those of acute appendicitis. It is best to treat such children conservatively with replacement therapy with cryoprecipitate. Usually after treatment is started the child improves over four to six hours, and the likelihood of appendicitis can be ruled out. Over the long run less harm will be done by conservative management than by an early laparotomy for appendicitis. Treatment of ilio-psoas bleeding usually requires three to six days of replacement therapy.

Gastrointestinal bleeding. This is not very common in hemophiliacs, and when it occurs it often can be treated with one or two days of replacement therapy. If it persists longer, the child should have the same diagnostic workup for gastrointestinal bleeding as does a child without hemophilia.

Renal bleeding. Hematuria is very common, it may continue for days or weeks, and it is usually renal in origin. The amount of blood loss usually is far less than would be estimated on the basis of a simple inspection of urine. Even a 1:100 dilution of blood in urine gives the appearance of almost pure blood. Treatment with cryoprecipitate usually will stop the hematuria after about two or three days of treatment.

Surface-wound bleeding. For any large cuts, it is best to use butterfly bandages and Oxycel with pressure. Sutures should be used only with cryoprecipitate treatment, for otherwise the sutures prevent the escape of blood without stopping the bleeding, and a large hematoma will collect under the wound. Cauterization for epistaxis is contraindicated in hemophilia. It may temporarily decrease the bleeding, but when the inevitable slough separates, the patient will bleed from a larger area than he did initially. Scalp hematomas may lead to necrosis of overlying skin, and should be treated promptly if they are significant in size.

Surgery. The hemophiliac patient needs replacement therapy prior to any surgical procedure and for a period of complete wound healing that usually lasts between 10 and 14 days. Prior to any surgery in a hemophiliac patient, a test for inhibitors should always be carried out. Inhibitors occur mainly in the severe hemophiliacs, and if present, surgery is contraindicated, unless it is necessary to save the patient's life. Blood transfusion and replacement therapy will often only raise the titer of the inhibitor and completely fail to control the bleeding. In a life-threatening situation, the only recourse is either to give massive doses of cryoprecipitate in an attempt to overwhelm the inhibitor, or to do massive exchange transfusions. An easy way to test for an inhibitor is to do a clotting time approximately half an hour after infusion of an appropriate dose of

cryoprecipitate. If the clotting time is prolonged, factor VIII is under 1 per cent, and an inhibitor must therefore be present. Any orthopedic surgery or any surgery involving the lower extremities very often requires a much longer period of replacement therapy—sometimes as long as three or four weeks.

Hemarthrosis. Mild incipient bleeding can be treated with immobilization of the extremity and the application of a tight Ace bandage and ice packs. If the joint is distended, a dose of cryoprecipitate is given and the joint is promptly aspirated,[2, 3, 4] and a posterior splint or bivalve cast is applied. After three or four days, the cast is removed three or four times a day, and active motion of the joint is carried out by the patient for approximately 10 minutes at a time. The child is continued on cryoprecipitate during that four-day period, and then usually is sent home on the fifth day with instructions to increase the flexion and extension of the involved extremity gradually until it is back to normal function. The objectives of this program are (1) to minimize the damage to the joint caused by the presence of blood, and hopefully, thereby, to minimize subsequent functional limitation of the joint; (2) immediate relief of pain after aspiration; and (3) a quicker return of normal function to the joint.

Emotional aspects. A thorough understanding of the social and emotional aspects are of great importance in the management of the family with hemophilia. At the time of diagnosis, the mother may have feelings of guilt, and the father may blame the mother for giving the disease to their son. Support with explanations of the disease and the methods of preventing bleeding and managing bleeding episodes must be thorough and compassionate.

The parents, with guidance from the physician, must help the child "learn to live with hemophilia without being emotionally crippled, become responsible and independent, and become careful but unafraid."[5] They have to be reassured that each bleeding episode is not due to their carelessness. Overrestriction of the child's mental and emotional development must be avoided while he is being protected from rough physical activity. Admittedly this is not easy, but it should be discussed frankly with the parents.

REPLACEMENT THERAPY

Cryoprecipitate. This is the optimal factor VIII concentrate at the present time, and it can be prepared easily by virtually all blood banks.[1, 6, 7] The plasma is frozen in 10 to 15 minutes, and then thawed at 4°C for 24 hours. When it is centrifuged, the cryoprecipitate clings to the bottom of the container. The plasma is removed, and 10 to 20 cc. of diluent is added to the remaining cryoprecipitate before it is stored at –30°C. Thus, approximately 70 per cent of the factor VIII from a unit of blood is given in as little volume as 20 cc. It is concentrated 20 times more than plasma, as far as factor VIII is concerned, and any concern about circulatory overload is virtually eliminated.

Approximately 50 per cent of the factor VIII is recovered when it is infused into a patient. A unit of cryoprecipitate is defined as the amount extracted from one unit of blood. The usual dose is two units per 12 Kg. as a loading dose, and one unit per 12 Kg. every 12 hours is the maintenance dose. This can be infused through intravenous tubing, or can be injected with a syringe. Many older patients prefer two injections per day, rather than the inconvenience of a continuously running intravenous drip.

It is important to be absolutely sure that the patient has classical hemophilia when one uses cryoprecipitate. It does not contain significant levels of any clotting factors other than VIII and fibrinogen, and thus would be useless in the treatment of Christmas disease (hemophilia B), which requires factor IX-replacement with plasma.

Fresh frozen plasma (FFP). This can be used if cryoprecipitate is unavailable. However levels required for surgical coverage (>30 per cent) cannot be achieved with plasma infusions. The plasma is thawed in a 37°C water bath and is infused into the patient within an hour. It should be type-specific, for FFP often contains a few red cells and could sensitize the recipient if he has a different blood type.

The initial dose is 7 cc./lb., and then 5 cc./lb. is given every 12 hours. At that dose schedule, the risk of circulatory overload from plasma proteins is very small over a one- or two-week period. This same dose schedule is used in treating Christmas disease (hemophilia B), al-

though in non-emergency situations banked plasma, rather than fresh frozen plasma, can be used. Factor IX is much more stable than factor VIII on storage, although Smith[8] says it is not so stable as previously thought, and recommends FFP for the treatment of Christmas disease.

Other preparations. Cohn's Fraction I (human fibrinogen, AHF rich, Merck, Sharp & Dohme) is effective for replacement therapy in classical hemophilia. It can cause hemolytic episodes in some patients and is quite expensive. The loading dose is 0.2 to 0.3 Gm./Kg., and 0.1 to 0.3 Gm./Kg. is administered for maintenance every 12 hours.

A glycine precipitate preparation (Hyland Lab.)[9, 10] is also very effective, but is more expensive and has an increased risk of causing hepatitis, for it is prepared from pooled plasma. It has a 20- to 30-fold purification of factor VIII, and therefore can be used without risk of circulatory overload.

IDIOPATHIC THROMBOCYTOPENIC PURPURA (I.T.P.)

Usually there is a sudden onset, often after a URI or following an exanthem or chickenpox or infectious mononucleosis. The child usually will present with small petechiae or very large ecchymoses, or will present with nose bleeds, bleeding gums, bleeding from the gastrointestinal tract, or bleeding from the kidneys. Intracranial bleeding is the most serious complication, and it occurs in probably less than 2 per cent of cases. Usually it occurs very early, ordinarily within the first month and often within the first week of the disease. It is currently felt that the thrombocytopenia is due to antigenic alteration of the platelets, and a development of antibodies resulting in an increased destruction of platelets. Platelets transfused into such patients have a very short survival, and platelet transfusions are therefore used only in life-threatening situations or prior to surgery.

The physical examination of the child shows no abnormalities other than petechiae or ecchymoses. The spleen usually is not enlarged, and if it is significantly enlarged the diagnosis is most likely something other than ITP. The blood usually shows a normal hemoglobin, unless the child has lost blood from bleeding. The white count is normal, with no abnormal cells, and the platelet count usually is less than 50,000/cu. mm. If a platelet count cannot be obtained, the number of platelets on the routine smear will be less than 6 per oil-immersion field. If thrombocytopenia is documented, no other coagulation studies are indicated. A bone marrow is done to rule out leukemia and aplastic anemia, and in ITP it usually shows an increase in megakaryocytes. A lupus erythematosus prep should be done, for lupus erythematosus can present for long periods as typical ITP before any of the other characteristic symptoms become manifest.

Treatment with 2 mg./Kg. of prednisone is continued for a three-week period, and then is tapered off during the fourth week. If serious bleeding is not present, the child can be followed once a week on an outpatient basis. Blood pressures should always be taken in an effort to detect any hypertension secondary to the steroid therapy. Often there is a decrease in bleeding after several days of treatment, even though the platelet count has not risen. This has been attributed to the nonspecific effect of the steroids on the small blood vessels. With steroid therapy, permanent remission would be seen in about 25 per cent, and 40 per cent would show a temporary increase, which then would drop when the steroids were stopped.[11] There is no correlation between the response to steroids and the ultimate prognosis, and there is no evidence that steroid treatment in any way decreases the incidence of chronic ITP. There is some evidence that prolonged steroid therapy may actually suppress platelet production.[12, 13] After the four-week course, we would discontinue the steroids regardless of the platelet count, unless the child has significant bleeding. If bleeding symptoms recur when the steroids are withdrawn, we give the smallest dose needed to control the symptoms. If the child does not respond to the initial course of steroids, we give him a second course two months after the initial one. Troublesome epistaxis can often be managed by packing the nose with Gelfoam and allowing it to remain in the nose until it spontaneously drops out.

Eighty per cent of children with acute ITP will have complete recovery without any specific treatment, and 60 per cent will recover

in three months—usually within four to six weeks.[11] Twenty per cent will go into the chronic phase and will have persistent thrombocytopenia after six months. A child with chronic ITP is not kept on steroids unless he has significant symptoms. If the thrombocytopenia has persisted beyond a year, a splenectomy is done if significant symptoms are present. Many children will have only minimal symptoms, and a conservative approach is taken in the hope of a spontaneous remission. Remissions have been reported as long as 2½ years after onset,[14] and Schulman[11] has reported several occurring after the usual one-year waiting period. Approximately 60 per cent of patients with chronic ITP will go into remission after splenectomy.

In addition to the possibility of a spontaneous remission, a conservative approach to splenectomy is justified because of the risk of fulminating post-splenectomy infections. Although such infections occur mainly in patients splenectomized under four years of age or with severe underlying diseases, we have seen splenectomized patients succumb to fulminating pneumococcal infections who were outside of the age of greatest risk and without severe underlying diseases. If splenectomy is done, penicillin prophylaxis is given indefinitely and the parents are instructed to seek prompt medical care at the first sign of an infectious illness.

SUMMARY

The approach to a child with a possible bleeding disorder has been discussed. A thorough and concise history has been emphasized as the most important aspect of the initial evaluation. Indications for a bleeding workup have been listed, and appropriate screening tests have been outlined. The many facets in the management of the patient with hemophilia have been presented, and the newer methods of replacement therapy have been outlined. An approach to the treatment of idiopathic thrombocytopenic purpura has been discussed.

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Human Complement: A Concise Survey of Recent Advances and Possible Clinical Applications

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THE TERM COMPLEMENT refers to a group of nine serum proteins, found in normal animals and humans, that are involved in many common inflammatory reactions such as phagocytosis, leukocyte chemotaxis, increased vascular permeability and cell lysis.[1] Some of these components act as enzymes while others serve as their substrates. The complement reaction sequence is indeed complex and may superficially be compared with the clotting mechanism. In both cases there is a long train of reactions in which the products of earlier portions of the process become involved as enzymes and substrates later in the scheme.

Complement components participate in many immune processes originally ascribed solely to antibodies, such as the inflammatory processes mentioned above. Clinical medicine is beginning to utilize much of the theoretical complement work while accumulating a glossary of pathological entities associated with alterations in the system. Pathological derangements include rheumatic fever, rheumatoid arthritis, systemic lupus erythematosus, hemolytic anemias, glomerulonephritis, nephrotic syndrome, cirrhosis and transplantation rejection.[2-4] A schematic view of the complement system will help the reader to a better understanding of its role in disease (see Figure 1).

It has been thought for many years that antibody must react with antigen before the complement reactions are initiated. Laboratory evidence is beginning to suggest that this antigen-antibody union orients certain portions of the antibody molecule so as to activate the complement system in a manner as yet unknown. Ishizaka[5] has demonstrated that aggregated gamma globulin, by itself, initiates complement activity. The antigen may merely organize antibody structure so as to allow it to interact with the complement system. Aggregation occurs in diseases such as multiple myeloma. It may also be observed in samples of normal blood stored for prolonged periods of time. This aggregation of antibody molecules, which in no way requires the participation of a specific antigen-antibody reaction, will cue the complement system into action. Depressed complement levels will be observed in such samples. Serologic tests carried out on these blood samples will give false positive results. Thus, the physician may receive a statement from the laboratory that the blood he submitted for serologic analysis cannot be used because of "anti-complementary activity."

Once the antigen has reacted with antibody, or "has been sensitized" as the immunologist would state it, the first component of the complement system (C′1) is brought into action. It is converted from an inactive proenzyme to an activated molecule with marked esterase activity[6] (i.e., it splits ester bonds). This enzymatic power is important in both the normal sequence of complement activity and in at least one pathologic condition (hereditary angioneurotic edema). The esterase activity normally splits portions from two later acting components (C′4 and C′2), exposing sites which may then be attached to the antigen-antibody com-

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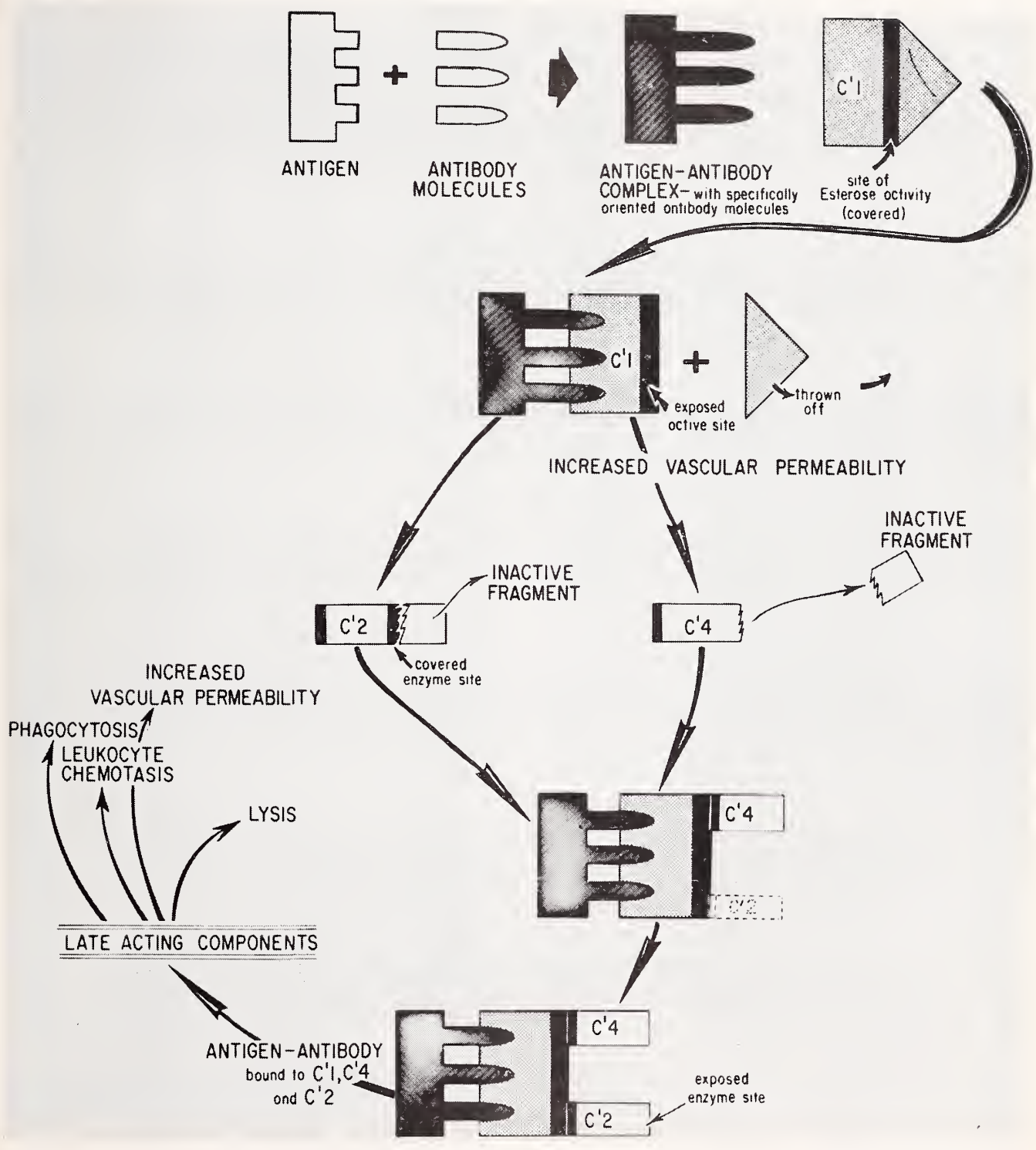


Figure 1. Antigen combines with antibody molecules so as to orient the antibody molecules in a specific spatial conformation, which in some unknown manner combines with the first component of complement (C'1). C'1 is then activated, exposing an esterase site which cleaves portions from the fourth (C'4) and second (C'2) components. These two molecules then attach to the antigen-antibody-C'1 complex. C'2 is subsequently activated, exposing an enzymatic site which probably acts on one of the late acting components (C'3). The various complement-mediated inflammatory processes are shown. (See text for details.)

plex. The C′4 component must attach to the sensitized antigen before the C′2 molecule can react. There is growing evidence that the C′2 molecule becomes activated so as to act on components involved later in the sequence.

In hereditary angioneurotic edema[7] an inhibitor to C′1, found in all normal sera, is lacking. Its absence allows the activated C′1 molecule to perform in the absence of antigen-antibody complexes and destroy the C′4 and C′2 components. At the same time the activated C′1 molecule, in a manner still unknown, increases vascular permeability in localized areas.

The remaining six components needed to lyse the cell were originally thought to be composed of only one component (C′3). Certain of these late acting components are specifically associated with immunologically mediated inflammatory responses. Once C′3 has been bound to the antigen-antibody complex, phagocytosis and immune adherence will occur. The fifth and sixth components are associated with a factor increasing vascular permeability called anaphylatoxin, while the sixth component is associated with leukocyte chemotaxis (attraction of leukocytes to foreign material).

The cells of origin of the various complement components have not been completely worked out, but the hepatic, intestinal and reticuloendothelial systems are most likely involved. An incompletely understood homeostatic mechanism exists which maintains constant levels of some complement components even in the face of greatly increased utilization.[8] Patients with certain renal abnormalities excrete large amounts of the fourth component of complement in their urine, but still maintain normal serum levels. This observation implies a greatly increased means of production and further complicates attempts to correlate altered complement levels with disease. One component may be utilized and replaced so quickly that one may fail to observe any change by assay procedures. For this reason, new techniques are being developed to measure the breakdown products of complement components that will accumulate only in the immune reaction.[9]

Recent reports have described the binding of various complement components to the basement membrane of kidney tissue and have associated these events with complement mediated destruction.[10] One must not jump to the conclusion that complement produced the observed pathology. It is quite possible that the tissue was altered so drastically by some other means that the body treated it as foreign material and produced antibodies against it, which, in turn, bound complement.

What practical role will complement play in the treatment of your patients? New complement-fixation procedures have recently been developed which are more accurate and sensitive than those hitherto in existence.[11] The assays for intermediate breakdown products mentioned above will enable the future clinician not only to diagnose immunologic disease more easily, but also to follow its progression in the laboratory. For example one might be able to predict exacerbations of rheumatoid arthritis or of systemic lupus erythematosus, or to anticipate transplantation-rejection phenomena. One would then treat the preclinical state, and reduce or prevent any or all clinical manifestations. If, as is strongly suggested,[12] complement contributes to transplantation rejection, it may be possible specifically to block certain complement components by means of inhibitors or antibodies.

More detailed reviews dealing with the complement system are readily available to those who desire additional information.[13-15]

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Look for an Increase of

Organophosphate Poisonings in Iowa

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Whiting

As a result of the increased use of organophosphate insecticides by farmers in their attempts to control corn root worm and cyst nematodes, there will be an increased incidence of exposure of human beings to these deadly poisons. Farmers, truckers and other people who come into contact with these materials must use extreme care in handling them, and they must also be careful about destroying the containers in which they were shipped.

In most instances, the big problem will be that people have not been adequately briefed on the potency of these poisons and the routes by which they can enter the body. Some of the organophosphate poisons have extremely high toxicities, and can enter the body through the nose, through the mouth or through the skin. Absorption through the skin is especially easy if there is a rash or a cut.

I should like to list the names of some of the commercial preparations of these poisons, and to present some information about them. Demeton or Systox, Diazinon, Parathion, Thimet and Dasanit are some of the trade names. Many other compounds used by farmers contain combinations of them, with or without herbicides and another group of poisons called chlorinated hydrocarbons. In most instances the combinations simply exacerbate the symptoms that any one of the organophosphates ordinarily produces, but they also complicate the problem of determining the best treatment to use in the toxicologic emergency.

It has been found that female animals are more susceptible than male animals to most of these chemicals, and I might comment that in the series of human patients whom I observed last year, the same sex differential was observable. There are a couple of exceptions to that rule, however. Methyl parathion, for example, is more dangerous to males; the lethal dose of it for males is 14 mg./Kg., but for females it is 24 mg./Kg. For schradan (OMPA) the differential is even more striking—9.1 mg./Kg. for males and 42 mg./Kg. for females. The differing toxicities for the two sexes are consequences of the varying hormone patterns of the male and the female. These differences have been said to apply only to rats, but my limited experience indicates that they are also true of human beings.

One other drug presently in use is of interest to us. It is called Phosdrin. Phosdrin has a very dangerous property. It is more toxic when applied to the skin than when swallowed. Of course it is deadly when inhaled.

As an example of the potency of these poisons, I might point out that 65 mg., or much less than one drop, of pure Systox, Di-Syston, phorate, Phosdrin, tetraethyl pyrophosphate or TEPP could cause death. Probably no more than one tenth of the lethal amount, if absorbed rapidly, could cause severe illness.

The symptoms of poisoning produced by any of this group of insecticides are headache, gid-

diness, blurred vision, weakness, nausea, cramps, diarrhea, chest discomfort, nervousness, sweating, myosis, tearing, salivation, pulmonary edema, cyanosis, papilledema, uncontrollable muscle twitches, convulsions, coma, loss of reflexes and loss of sphincter control. Of course as one gets toward the end of that list of symptoms he notes that the signs reflect a poisoning that is fulminating and acute. I am sure that by the time that loss of sphincter control occurs, the chances of the patient's recovering are pretty slight. In my experience, the commonest complaints have been fainting, severe tremors, shakiness, muscle weakness, occasional mental confusion, and in a couple of cases convulsions. Convulsions in patients with acute cases of poisoning must be handled correctly and expeditiously, or the patient will be lost. It should also be noted that many of the anticonvulsive drugs will aggravate the problem, and thus are contraindicated.

To substantiate the diagnosis, if one has observed the above symptoms, one can run a cholinesterase determination. There are two or three methods for doing this. The commonest method is the cholinesterase determination for red cells. Very few laboratories are running these at present, but more should start doing them, for they are really needed as emergency procedures in farm areas.

The normal cholinesterase enzyme activity in red cells varies from 0.39 to 1.02, and the average is 0.766. In plasma, it ranges from 0.44 to 1.63, and the average is 0.953. There is one other method of determining the cholinesterase values in blood—a continuous titration method, using gas chromatography. It is used, in most cases, in research laboratories.

TREATMENT

Atropine is the antidote of choice, provided that it is used as soon as symptoms of poisoning appear, and provided that the toxic dose has not been too great. It is important to give large doses of atropine—up to 10 times the usual amount. My feeling is that it should be given intravenously, and the treatment we have used is the one that can be found in CLINICAL HANDBOOK ON ECONOMIC POISONS (U. S. Department of Health, Education and Welfare, Public Health Service, 1963, pages 18-19).

In very severe cases, the following order of treatment is recommended:

1. Artificial respiration, if required, preferably by mechanical means.
2. Atropine sulfate, 2 to 4 mg. intravenously, as soon as cyanosis has been overcome. Repeat at five to 10 minute intervals until signs of atropinization appear. They are a dry, flushed skin and a pulse rate as high as 140/min.
3. Decontamination of the skin, stomach and eyes, as indicated.
4. Symptomatic treatment.

In the more usual case, proceed as follows:

1. Atropine sulfate, 1 to 2 mg. ($\frac{1}{60}$ to $\frac{1}{30}$ grain) if symptoms appear. If excessive secretions occur, keep the patient fully atropinized. Give atropine sulfate every hour up to 25 to 50 mg. in a day.
2. Decontaminate the skin, stomach and eyes, as indicated.
3. Administer 2-PAM* slowly, intravenously, if the patient has failed to respond satisfactorily to atropine sulfate. The dose is 1 Gm. for adults, or 0.25 Gm. for infants.
4. Symptomatic treatment.

Morphine, theophylline, aminophyllin and large amounts of intravenous fluids are contraindicated. Atropine should not be given to a cyanotic patient until oxygenation has been restored by artificial respiration. Tranquilizers are seldom indicated, and there is evidence that phenothiazine drugs increase mortality in experimental animals poisoned by organic phosphates.

Reports seem now to indicate that other compounds besides morphines and theophylline potentiate the effect of organophosphates. The additive effects of pesticides in combination are not the only major problem. There is a potentiation of the serious effects of the organophosphates by certain drugs of the phenothiazine types.

It appears that reserpine, chlordiazepoxide, hexobarbital and phenobarbital have caused the greatest enhancement of toxicity in female rats that had been given 2 and 4 mg./Kg. of parathion. Chlorpromazine, meprobamate and alcohol increased the toxic effects of parathion

* 2-PAM (2-pyridine aldoxime methiodide) is available from Campbell Pharmaceuticals, Inc., 121 East Twenty-fourth Street, New York City 10010. It is also marketed by Ayerst Laboratories, Inc.

TABLE I

POTENTIATION OF PARATHION BY CENTRAL DEPRESSANT DRUGS IN FEMALE RATS[a]

Parathion-drug Combination	Dose of Drug[b] (mg./Kg.)	Pretreatment Time of Drug (hours)	Toxicity[a] Caused by Parathion[b] 2 mg./Kg.	4 mg./Kg.	8 mg./Kg.
Chlorpromazine	16	0.5	10/0	70/0[c]	100/90
Meprobamate	200	0.5	10/0	50/0[c]	70/90
Reserpine	5	4.0	40/0[c]	80/0[c]	100/90
Chlordiazepoxide	80	0.5	90/10[c]	70/30	100/90
Hexobarbital	100	0.5	70/10[c]	100/30[c]	100/90
Phenobarbital	100	0.5	90/10[c]	30/30[c]	100/90
Alcohol	1,500	0.5	20/10	40/10	90/100

[a] Toxicity = $\frac{\%\ \text{mortality parathion-drug (N = 10)}}{\%\ \text{mortality parathion (N = 10)}}$

[b] All doses administered intraperitoneally.

[c] Values are signicantly different at 0.05 level.

only after the 4 mg./Kg. dose. There was no evidence of protection. Thus all the central-depressant drugs showed a tendency to interact with parathion by increasing the toxicity of the anticholinesterase agent.

During 1967, in my private practice of medicine in a small farming community, I saw 32 individuals who had been exposed to organophosphates and were poisoning suspects. They all were provided cholinesterase determinations. The normal range of cholinesterase values in our laboratory was 40 to 80 units. In some of these people the cholinesterases ranged from as low as 3 to as high as 90 units. It might be noted that while my laboratory was running those determinations we made cholinesterase determinations on five controls —people who had had no organophosphate exposures. Those controls were found to have 90, 100, 90, 80 and 90 units, respectively.

Depression of the cholinesterase value in the blood, whether determined by red cell, plasma or some other technique, should be a very strong hint as to the nature of the trouble. Following is a chart that gives particulars about a few of the more classical cases in my series, showing the history and my theories regarding how the poisonings came about.

M. F. and A. L. were the only females in the series. However they ascribed their toxic doses to absorption through the skin of their hands and feet as they walked barefoot on ground that had been treated eight months earlier.

As noted at the bottom of the chart, the two females with organophosphate poisoning had had only very slight exposures, and also had absorbed the agent through the skin. I think it quite possible that those girls would have shown much more severe reactions if they had actually handled the chemicals as the men had. Thus I should advise any women or girls who are helping on a farm definitely to avoid these chemicals at all costs! One particular safety precaution for women or girls working in detasseling crews, etc. is to be sure to wear shoes, so that their skin does not come into contact with treated ground.

In summary, it is most important for the physician to learn the patient's symptoms, to get a history of the patient's exposure, and particularly, wherever possible, to learn the exact type of insecticide and determine its LD_{50} rate.* Then he should institute immediate treatment, as indicated above and as given in the HANDBOOK ON ECONOMIC POISONS.

* LD_{50} is the dosage which has proved lethal for 50 per cent of laboratory animals tested.

TABLE 2

LABORATORY CHOLINESTERASE DETERMINATIONS ON EXPOSED PERSONS

Patients	Age	Date	Cholinesterase (normal 40-80 units)	History	Conclusion
G. L.	39	5-1-'67	70	Fatigue, headache, muscle weakness.	Not organophosphate.
H. M.	53	5-4-'67	5	Chills, headache, pulmonary edema, cyanosis and convulsions. Time from onset of complaints to convulsions approximately 20 min. Patient treated immediately with massive doses of atropine, intravenously only. Seizures controlled. Blood sample on cessation of seizures showed cholinesterase of 35 units.	Severe organophosphate poisoning by inhalation of fumes from corn planter.
H. M.	53	5-6-'67	35	Patient maintained on atropine q4h.	
V. B.	37	5-6-'67	50	History of handling material. Chest difficulty and headache.	Not organophosphate.
L. M.	54	5-16-'67	30	History identical with that of patient H. M. Used Thimet in corn planting on two days. Severe atrial fibrillation responded to atropine.	Organophosphate poisoning.
L. M.	54	5-19-'67	25	Patient had small relapse. Atropine dosage was lessened.	
L. M.	54	5-19-'67	80	Recovery rapid.	
D. L.	41	5-23-'67	20	Complaints same as H. M.'s. Poison entered through skin. Patient had habit of digging up a few hills with bare hands to see whether it had sprouted. No other history of exposure.	Organophosphate poisoning.
C. P.	54	5-29-'67	32	Fatigue, chest distress, dyspnea, miosis.	Organophosphate poisoning.
C. P.	54	5-30-'68	70	No symptoms; patient improved.	
V. B.	37	6-6-'67	3	Complaints same as H. M.'s. Rx same as H. M.'s.	Organophosphate poisoning.
R. G.	13	6-9-'67	a.m. 52 p.m. 64	Improved on Rx.	
M. F.	18	7-17-'67	25	Severe twitching, headache, muscle fatigue, syncope with associated shock. Intravenous atropine brought immediate response.	Organophosphate poisoning.
A. L.	16	7-17-'67	40	Minor symptoms; no Rx.	Organophosphate poisoning.

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Psychiatry and Mental Retardation

Two Statements Published With the Approval of the Council of the American Psychiatric Association*

In December, 1963, the Council of the American Psychiatric Association adopted a position statement concerning the report to the President of the President's Panel on Mental Retardation, released in October, 1962, and entitled A PROPOSED PROGRAM FOR NATIONAL ACTION TO COMBAT MENTAL RETARDATION. The full text of Council's statement is reprinted below. In general it noted that it was "incumbent on the American Psychiatric Association to strengthen its own leadership role in the field of mental retardation, and to work with other medical specialists and physicians generally toward more concentrated concern with retardation."

Following the release of that statement it became incumbent on the Association to elaborate, with as much specificity as possible, some of the ways that the profession of psychiatry might give expression to "more concentrated concern" with mental retardation. With the support of the Maurice Falk Medical Fund, a small "working conference" of outstanding experts in the field was called in the spring of 1965 to recommend an action program in the field.† The findings of that conference were reviewed by the Council and its Executive Committee at several meetings in the fall of 1965 and also by several other groups, notably the APA Committees on Mental Retardation, Child Psychiatry, Medical Education and Standards for Psychiatric Hospitals and Clinics. The findings were also discussed informally with the American Academy of Child Psychiatry and the American Board of Psychiatry and Neurology.

A second position statement was then prepared in the light of that review and discussion. It was approved by the Executive Committee of the Council, meeting on February 27, 1966. It also appears below.

* Reprinted from AMERICAN JOURNAL OF PSYCHIATRY, 122: 1302-1314, (May) 1966.

† The participants were: the Honorable David L. Bazelon and Philip Hallen, Drs. Bertram Brown, Malcolm J. Farrell, George Gardner, Reginald Lourie, Leo Madow, Frank T. Rafferty, Julius Richmond, George Tarjan, Stafford Warren, and Cecil Wittson, together with four representatives of the APA central office staff: Drs. Walter Barton, B. W. Hogan, and Donald W. Hammersley and Mr. Robert L. Robinson, editorial consultant.

I. A POSITION STATEMENT CONCERNING A PROPOSED PROGRAM FOR NATIONAL ACTION TO COMBAT MENTAL RETARDATION, REPORT TO THE PRESIDENT, THE PRESIDENT'S PANEL ON MENTAL RETARDATION, OCTOBER, 1962 (APPROVED BY THE APA COUNCIL, DECEMBER 15, 1963)

The Council of the American Psychiatric Association hereby makes known its positive support of A PROPOSED PROGRAM FOR NATIONAL ACTION TO COMBAT MENTAL RETARDATION, formulated by the President's Panel on Mental Retardation and presented to the public in October, 1962.

The proposed program thoughtfully assesses the medical, social, economic and cultural factors underlying this severe national problem. It delineates the responsibilities of public and private agencies, of individual practitioners in the several professions, and of the citizenry in overcoming this problem. It meets the fundamental criteria that must characterize an effective national attack on the entire range of mental disorders, namely, that the attack shall be comprehensive and community-centered; that it shall provide a dynamic continuum of services to the retarded—that is, the right kind of services, at the right time and at the right place; and that the cost of the program shall be shared by private and public resources at the federal, state and local levels.

The proposed program reflects an awareness of the contributions psychiatry can make to the prevention of retardation, and to the treatment, care and rehabilitation of the retarded. It is premised on a holistic approach to the retarded child, encompassing his emotional as well as his physical needs. It stresses the special adverse psychological effects of maternal deprivation on the retarded child, and quite properly relates such deprivation to the depressed social, economic and cultural levels of large segments of the population. It takes into account the unique impact of attitudes of parents and siblings on the retarded child. It cites the psychiatric clinic as an important resource for diagnosis and treatment, and generally recognizes the basic role of psychiatry in the unfolding of the program. The Council considers that the Panel's

report marks an auspicious starting point for reversing the trend in recent decades toward separation of psychiatry—and of medicine generally—from a field which has been and remains one of its major concerns.

Accordingly, the Council approves the proposed program and its recommendations. It pledges the American Psychiatric Association to work toward implementation of the program and commends the President's Panel for a task superbly executed.

PSYCHIATRY'S CONTRIBUTION TO MENTAL RETARDATION

In the Council's opinion, however, it is incumbent on the Association, as the proposed program unfolds, to elaborate on the nature of the psychiatric contribution in a measure that goes considerably beyond what the President's Panel has expressed or implied.

Although mental retardation is the concern of many disciplines, it has always been viewed as an area of special interest within psychiatry. Admittedly, intellectual currents and a variety of social pressures have combined to impel proportionately fewer psychiatrists to enter a field that has grown rapidly in its demands for service. Still, the psychiatric contribution remains fundamental to the construction of a total program for the retarded.

The special interest of the psychiatrist in mental retardation stems from his basic training and clinical skills, which are as applicable to the retarded as to other children. The psychiatrist considers that the retarded child stands in the same need of love, affection, security, and personal significance as do all other children. Psychological factors attendant on different stages of growth and development are similar for all children. The retarded, within the limits of their intellectual deficits, are quite as capable as others of healthy personality development.

It is clear, however, that the mentally retarded child faces very special hazards in developing the ability to handle life's stresses. These hazards have to do with the conscious and unconscious anxieties and conflicts that develop in him in reaction to the feelings and attitudes—also often unconscious—of parents, siblings and others about him. The mentally retarded child is particularly subject to emotional disturbances which must be diagnosed and treated. The psychiatrist brings to his configuration of hazards a competence in identifying the presence and degree of emotional disturbances as they may inhibit learning, impair thinking and distort perception. He can help to assess the dynamics involved in the special biological, social, cultural and behavioral stresses influencing the child, and can coordinate his understanding of interpersonal and intrapsychic factors with his understanding, as a physician, of the physiological factors. The clinical diagnosis, by definition, considers the possibility of metabolic, sensory or neurologic disorder calling for referral and consultation with the pediatrician or other medical specialists, just as the latter's diagnoses consider the need for psychiatric consultation on emotional disturbances and behavioral problems.

The psychiatrist can assist parents and siblings to understand the retarded child's needs, to discern the positive supports for the child inherent in the family constellation and to gain insight into often unrecognized feelings of guilt, rejection, hostility and overprotectiveness and their negative impact on the child's healthy personality growth. Equal recognition is given to the retarded child's impact on other family members. This reaction may be positive or negative.

The application of this kind of clinical skill in a variety of clinical settings can be most telling in relation to the very large numbers of mildly or moderately retarded children who present no encephalopathy, inborn errors of metabolism or genetically-determined or other physical defect, and who, properly nurtured, bear much promise of making adequate social adjustments.

It may be further postulated that the psychiatrist, in the role of consultant, collaborator, teacher, clinician, research worker or administrator, will be willing to contribute his special knowledge and skills in appropriate measure at every point in the "continuum of services" projected by the President's Panel. That is, his counsel should ideally comprise an important ingredient in the formulation of a total management and life-treatment plan for the retarded child, to help ensure that the plan relates to all the dynamic factors involved. Thus, if each component of the continuum is to be maximally effective, the psychiatrist's contribution will extend beyond purely clinical settings to schools, social agencies, rehabilitation services and special facilities for the retarded.

NEED FOR STRONG MEDICAL LEADERSHIP

The Council senses a need for a sharper focus of leadership in the organization of services to the retarded at all levels—public and private, federal, state and local. The proposed program has expertly pinpointed the legion of persons, agencies, and professional and lay resources which must be harnessed to the task. The program has called appropriate attention to the need for better "communication," "cooperation," "interdepartmental committees" and "identification of an array of services." All of this is well taken. To reflect, however, on the present state of knowledge and organization in the field is to sense a need for a clearer image of leadership and administrative rallying points to which an "array of services" may look for a degree of primary initiative and leadership in the field.

For this reason, the Council questions the Panel's view of the needed qualifications of the superintendent of a residential center for the re-

tarded, to wit: "A competent person from any one of several disciplines involved or related to mental retardation might be wisely selected, provided he has sound professional training, some orientation in the disciplines other than his own which are relevant to mental retardation, demonstrated administrative ability and, last but not least, interest in the field of mental retardation and preferably some experience in it."

Such a loose definition of qualifications may be expedient in the light of a severe national manpower shortage, but the Council questions whether such indecision will best serve the Panel's goal of making the residential treatment center "basically therapeutic in character and emphasis, and closely linked to appropriate medical, educational and welfare programs in the community." Medical programs must be under medical leadership to safeguard the patient and to be maximally successful.

ON THE INTEGRATION OF SERVICES FOR THE MENTALLY ILL AND MENTALLY RETARDED

New federal legislation will facilitate the parallel development of new community centers for the mentally ill and the mentally retarded. It is to be regretted, in Council's view, that the planning process and the new facilities for the retarded are projected separately from similar facilities for the mentally ill, since the dichotomy manifestly poses problems in financing, administering and collaborating to achieve a common goal. Nevertheless, the new programs offer promising vistas for the integration of psychiatry with the other disciplines in service to the retarded. The new community mental health centers should extend their services to the retarded as a matter of routine. The new centers for the retarded should establish working relationships with the mental health centers as a matter of routine. The services of each, together with their affiliated hospitals and agencies, should be easily available to the other. Both should be positioned to make use of and provide consultation to the complete spectrum of the medical and health services of the community. Both should be projected in the context of a continuum of health, education and welfare services for the retarded. Comprehensive health services are the objective. In our view, fragmentation into special interest streams dilutes both the quality and extent of therapy possible.

THE OBLIGATION OF PSYCHIATRY

Further, it is incumbent on the American Psychiatric Association to strengthen its own leadership role in the field of mental retardation, and to work with other medical specialists, and with physicians generally, toward more concentrated concern with retardation. The need to augment and sharpen the role of medicine is most obvious in relation to the development of "therapeutic settings" for the management of the retarded and in relation to achieving the ultimate goal of prevention of retardation through research. While knowledge is limited, progress already achieved in biomedical research lends supporting emphasis to the concept. There is need for psychiatry and other branches of medicine to demonstrate that a more definitive medical responsibility in the field will, in the long run, attract more personnel to the task and better focus their efforts than the Panel's diffuse projection of "organization of services" promises to achieve.

In sum, the Council views A PROPOSED PROGRAM FOR NATIONAL ACTION TO COMBAT MENTAL RETARDATION as a sound basis for launching a national attack on this great problem area. The Council calls upon the appropriate committees, the district branches and the 15,000 members of the Association to work to strengthen medical and, specifically, psychiatric leadership in this field. It further urges them to elaborate and clarify for the professions and agencies most concerned, and for the public generally, the nature of the psychiatrist's role as clinician, consultant, teacher, research worker and administrator throughout the continuum of services for the retarded. Of members of the Association who serve on the faculties of medical schools and graduate training centers, the Council asks that they lend greater emphasis to mental retardation in the allotment of teaching hours and facilities. Upon members who serve as administrative heads of psychiatric treatment facilities, it presses the urgent need to extend the services of these facilities to greater numbers of the retarded. The Council directs the central office staff of the Association to lend fullest possible support to the committees, district branches and members in these endeavors, and to serve as a clearinghouse for the collection and dissemination of such information and data as will support their efforts.

II. A POSITION STATEMENT CONCERNING AN ACTION PROGRAM FOR PSYCHIATRY IN MENTAL RETARDATION (APPROVED BY THE APA COUNCIL FEBRUARY 27, 1966)

A NOTE ON THE HISTORY OF PSYCHIATRY IN MENTAL RETARDATION

The historical basis for psychiatric and related medical concern with mental retardation needs reemphasizing. It is no less true of the mentally retarded than the mentally ill that it was the early superintendents of mid-19th century mental hospitals in America who rescued both groups from the poorhouses of an earlier day, and began the development of progressive institutional care under medical direction. Two of APA's founders in the early 1840's, Dr. Samuel B. Woodward and Dr. Amariah Brigham, influenced by European leaders (notably Seguin), proposed progressive training programs for the retarded, many of whom were to be found in their institutions. Brigham in 1845 wrote: "We are of the opinion that much

may be done for their improvement and comfort; that many, instead of being a burden and expense to the community, may be so improved as to engage in useful employments."*

It was another early psychiatrist, Samuel Gridley Howe, who in 1848 established the first state institution for the retarded at the Massachusetts Institute for the Blind (later the Perkins Institution), in Boston. In the 40-year period following, some 15 such state institutions were established, and as Kanner states, "in practically all instances, the stimulus came from medical men, while in the European countries it came much more frequently from nonmedical sources."†

Many of those medical men were, of course, members of the American Psychiatric Association. Not until 1876 did the early physicians who specialized in mental retardation form their own subspecialty organization (later to become the American Association on Mental Deficiency). To the present day, membership in the two associations has significantly overlapped.

In sum, the briefest historical review of the treatment and care of the retarded in America reveals how inextricably it has been bound up with the treatment and care of other mental disorders, and that psychiatric and related medical initiative has been a primary source of humane and scientific advance in the field. The history of the gradual, though partial, withdrawal of psychiatrists and medical men from the field in recent decades is another story which demands telling. But this part of history does not contradict the continuity of the substantive investment of psychiatry and medicine in the field. One must further presume that the tendency to withdraw from the field has been a temporary phenomenon and a product of social forces now in process of reversal. The recent publication of a handbook on mental retardation for the primary physician by the American Medical Association is testimony to the observation—as, indeed, is the intent of these position statements.

It is abundantly clear, however, that the reaffirmation of their psychiatric investment in the field of mental retardation must be conceptualized in quite a different context from its historical beginnings. Since mental retardation is a symptom and not a diagnosis, its complex origins tax the imagination and ingenuity of scientist and clinician alike. Perhaps no other problem requires as delicate a blending of the science and art of medicine. Certainly no other problem in management necessitates a fuller use of other professional disciplines and community resources. The ultimate goal is in the area of prevention. Medicine has a large role to play in this connection, for it is estimated that approximately 50 per cent of cases are preventable. Although social factors are significant, medical considerations are also prominent. The physician is in a strategic position to identify mental retardation early, since he is usually the first professional person to have continuing contact with the infant and the young child.

THE NATURE OF THE PSYCHIATRIC CONTRIBUTION

Mental retardation, basically, is a problem of misdevelopment, maldevelopment or nondevelopment of intellectual and adaptational processes. It is not a unitary disorder but rather a product of many kinds of disorders, to the alleviation of which the psychiatrist's basic training enables him to contribute in clinical practice, in teaching and in research.

Another major contribution which psychiatry can make is essentially organizational and stimulatory in its nature, entailing the planning efforts of all of its organized components and agencies—the American Psychiatric Association, child psychiatrists, medical school departments of psychiatry, hospitals and community mental health centers, psychiatric agencies of government and all the rest. It is the responsibility of organized psychiatry as a major specialty in medicine, with its historical role and dedication, to take such leadership as it can in harnessing all medical resources for a truly effective attack on the problem. It is a matter of revitalizing its concern, in the context of furthering a total national medical program to combat mental retardation effectively. It is a matter of one segment of medicine's mustering such initiative as it can to bring all of medicine into the program. It is a matter of furthering medical leadership in the field, in the conviction that such leadership is essential if all the disciplines and agencies involved in a revitalized national program are to achieve a high degree of integrated effectiveness.

There is the further matter that the profession of psychiatry has much at stake in avoiding and reversing, in so far as possible, the tendency to establish duplicatory services for the mentally ill and the mentally retarded at federal, state and local levels throughout the nation. It is a question of making the most effective use of scarce power. We should not duplicate existing services or set up parallel clinics for purely jurisdictional reasons at a time when there is an overall shortage of personnel. Where possible, we should grow with the facilities we currently have. Where a community has an effective mental health clinic, it should be strengthened by the addition of specialists so that it can provide comprehensive services to the retarded. Where a good program for crippled children exists, for example, pediatric services could be supplemented with psychiatric and psy-

* Deutsch, Albert: THE MENTALLY ILL IN AMERICA. New York, Columbia University Press, 1952, p. 342.

† Kanner, Leo: A HISTORY OF THE CARE AND STUDY OF THE MENTALLY RETARDED. Springfield, Ill., Charles C Thomas, 1964, p. 62.

chological services, so that it can deal effectively with mentally disordered children.

Finally the profession of psychiatry, together with everyone else, can scarcely fail to be moved by the prevalence of mental retardation, reflected in the fact that there are five million mentally retarded persons in the United States, and that 126,000 retarded babies born each year will be considered retarded at some point in their lifetimes. Of greatest epidemiological concern to psychiatry is the fact that by far the largest group of the retarded are mildly retarded, most of them capable of complete assimilation into our society.*

It should also be recalled here that a special survey made for the APA-sponsored Conference on Training in Child Psychiatry (1963) revealed that in 102 state institutions for the mentally retarded, in 1962, there were approximately 717 staff physicians. Of those, fewer than 15 per cent were certified by the American Board of Psychiatry and Neurology, and another 10 per cent were "board eligible" in psychiatry, child psychiatry, neurology or pediatrics. A related survey at the same time showed that 736 pyschiatrists with a major interest in child psychiatry had indicated that of 28,000 children seen in their private practices during the preceding year, about 8½ per cent were mentally retarded. Obviously the clinical contribution of psychiatrists to the mentally retarded is substantial, and could be greatly enhanced in a truly effective national medical program.

Proceeding, then, from these conceptual frameworks and assumptions, the Council commends the following 21 principles, propositions and recommendations to all components and members of the Association. It is Council's judgment that they comprise useful points of departure in a collective effort to give practical expression to our resolve to "more concentrated concern" with mental retardation.

CONCERNING THE LEADERSHIP ROLE OF PSYCHIATRY

1. Manifestly, psychiatrists are very often in a position to develop and participate actively in comprehensive community programs for the diagnosis, treatment, care and rehabilitation of the retarded, and for the prevention of mental retardation. This is particularly true with reference to those program components which are primarily medical in purpose. Other qualified physicians may be similarily positioned, particularly pediatricians, neurologists, obstetricians and general practitioners. The underlying principle is that medical programs for the mentally retarded should be under medical leaders, including psychiatrists and other physicians.

2. The delineation of medical responsibility in a national program to meet the needs of the mentally retarded and their families is clearly the task of medicine as a whole, in collaboration with many other groups. The continuing elaboration of the medical role under the auspices of the American Medical Association is much to be desired. Publication by the AMA of a HANDBOOK ON MENTAL RETARDATION FOR THE PRIMARY PHYSICIAN (1965) establishes a favorable climate for proceeding along those lines. In such a delineation the specialties of psychiatry, pediatrics, neurology, obstetrics, public health, internal medicine and general practice will assume ever more significant roles as the total medical contribution is enhanced.

3. Existing public hospitals and other residential institutions for the retarded are confronted with the same range of problems that face the public mental hospitals. Those include, notably, inadequate staffing patterns, shortage of manpower and poor salary levels. The profession of psychiatry is giving the highest priority to the development of community services in mental health and mental retardation. The realization of an adequate national network of community services for the mentally ill and retarded, in time, through early case finding, may lead to an increase in the numbers of retarded persons dependent on public services. It is clearly a basic responsibility of psychiatry to join with other disciplines in advancing standards of treatment and care in existing and developing institutions for the mentally ill and retarded.

CONCERNING PSYCHIATRIC SERVICES FOR THE MENTALLY RETARDED AND THEIR FAMILIES

4. In general, the psychiatrist's role in the field of mental retardation includes the following:

a. Diagnosing a condition and formulating a treatment plan for the mentally retarded individual, including the setting up of guidelines for optimal personality development of the child and relief of the family's social and psychological stress attendant on the condition.

b. Serving as consultant to schools, courts, health, welfare and rehabilitation agencies in the communities on the psychiatric aspects of service, and on preventive programs for the retarded and their families.

c. Serving as administrator of services to the retarded which are primarily medical in purpose.

d. Serving as a member of national, state and community groups in comprehensive planning for the mentally retarded, both short- and long-range.

e. Collaborating in preventive work with special reference to alerting the public to social cultural and economic factors in our society which engender and prepetuate mental retardation and to the ways by

* For other statistical data on mental retardation in the United States see A PROPOSED PROGRAM FOR NATIONAL ACTION TO COMBAT MENTAL RETARDATION, Report of the President's Panel, October, 1962, p. 1 ff.

which they may be overcome through such devices as urban redevelopment, nursery schools, family-care programs, pre-parent education and similar social measures.

5. Psychiatrists, in general, are not initially viewed as "care-giving" doctors by the parents of newborn retarded babies. Rather, it is the primary physician—most often a general practitioner and frequently a pediatrician or obstetrician—who first identifies retardation. His role is a critical one. He is in the best position to become aware of the special sensitivities of a baby and its vulnerability in psycho-social development, to spot high-risk situations in the prenatal period, to render genetic counseling, to employ routine biochemical and developmental screening methods in the first stages of infancy and to counsel and refer the baby's family. The later effectiveness of the psychiatric contribution will bear a proportional relationship to the quality of care that has been previously rendered the retarded child and his family. It is therefore important for psychiatry to do all that it can to enhance the effectiveness of the primary physician in this context. Among other things, in the education of the primary physician it can contribute psychiatric insights that will sharpen his skill in the early detection and handling of cases of retardation with special reference to making him more aware of "the listless baby," "maternal deprivation," "babies without prenatal care," "the illegitimate baby," "the problems faced by parents of the retarded," "alerting signs of retardation" and so on. It can work with all other concerned groups for those basic community health services which are essential in support of the primary physician.

6. The elements of adequate community psychiatric programs for the mentally retarded are fundamentally the same as those required for comprehensive community mental health services, namely:

a. Development of an administrative structure to provide continuity of services.
b. Complete diagnostic and evaluation services on either an inpatient or outpatient basis.
c. Inpatient care during a period of intensive treatment or while a comprehensive plan is being formulated for the ongoing educational, medical and social needs of the retardate's adjustment to the community.
d. Day care programs, particularly for those retarded not suited for established special education classes in the school system, as well as a supplement to classroom work.
e. Consultation to health, education, welfare and rehabilitation agencies in the community whose services are or should be extended to the retarded.
f. Rehabilitation services, vocational and educational.
g. Public information and education programs to foster constructive community attitudes and support.
h. Training and research.

The treatment and care of the retarded can efficiently be made a part of the total network of community mental health services. Under some circumstances—particularly in some metropolitan areas, and in some medical centers and hospitals for the retarded—discrete mental retardation units may be developed as part of general health services. Where this occurs, the mental retardation unit should be part of the network of community health services, in geographic proximity and in maximum coordination with the mental health network and related health and welfare services, to avoid all possible duplication of effort and to insure appropriate sharing of manpower and services. When possible, "one door" in the community should lead to comprehensive child care. Existing dichotomies should be removed. The child must be evaluated as a whole within an integrated community mental health program. All legal, health and welfare agencies involved should subserve this intent. The traditional "disposition by labeling" according to the precepts of the law, the welfare department and health agencies should be displaced by the development and implementation of a constructive treatment plan for the child. This calls for the coordinated efforts of all agencies involved.

7. An effective program of prevention in mental retardation, both primary and secondary, calls for a coordinated effort on the part of many medical and nonmedical disciplines, including neurology, obstetrics, pediatrics, psychiatry, genetics, biology, psychology, sociology, economics, social work and education. The imperative of primary prevention at the biological level is most dramatically self-evident. The medical responsibility in primary prevention also looms especially large at other levels. The availability of genetic counseling and proper prenatal care is particularly vital.

Under the heading of secondary prevention, programs of public education leading to early detection and recognition of retardation, along with provision for infant and preschool screening, are essential. With all these disciplines psychiatry shares responsibility for maximally effective primary and secondary preventive programs. Psychiatry can make singular contributions by way of emphasizing to the professions and to the public the devastating effects on growth and development of various forms of deprivation and distortion—maternal, social, emotional and economic—and their impact on mental retardation. It is incumbent on psychiatry to assume a major responsibility to work for the elimination of social stigma and practices which impede a progressive approach to the treatment and care of the mentally retarded throughout the land. Indeed the psychiatrist, because of his overview of the impact of social forces on human ecology, is among the

most favorably positioned to play a leadership role in coordinating a total preventive effort.

8. Inasmuch as psychiatry shares with all others concerned in a national effort to promote public understanding and support of a program to combat mental retardation, it is a manifest responsibility of the American Psychiatric Association to step up its own information program on mental retardation to stimulate interest and foster leadership of the profession in the field of mental retardation. Among other devices, the AMERICAN JOURNAL OF PSYCHIATRY, the JOURNAL OF HOSPITAL AND COMMUNITY PSYCHIATRY and PSYCHIATRIC NEWS should actively solicit and publish more contributions from psychiatrists and related disciplines in this subject field. The Joint Information Service might constructively publish a monograph on "model" psychiatric treatment centers which have long since operated comprehensive service programs for mental retardation as well as for other mental disorders. By the same token, as a matter of course, the program committee for the annual meeting should feature quality sessions on mental retardation. The usefulness of describing successful hospital improvement and inservice training programs in mental retardation being funded by the National Institute of Mental Health merits consideration. In sum, present mechanisms for promoting interest, information and leadership in mental retardation among psychiatrists are inadequate and should be made more effective.

CONCERNING LIAISON RELATIONSHIPS

9. The American Psychiatric Association should work with all other major groups concerned toward the establishment of a central information and data collecting and retrieval agency in the field of mental retardation, possibly as part of the operations of the National Clearinghouse for Mental Health Information, or, if not, then through some other ad hoc facility. In the same manner that the Association has long sustained close working relationships with the National Association for Mental Health to further common goals in advancing the mental health movement, so should it extend its liaison relationships in the area of mental retardation. Among the organizations with which such liaison should be established are the American Association on Mental Deficiency, the National Association for Retarded Children and the leading professional organizations in pediatrics, neurology, obstetrics, gynecology and general practice. It is a safe presumption that such organizations harbor a resource potential which could be far more effectively realized in a combined and coordinated effort. Already, it is to be noted that the National Association for Mental Health has a formal liaison relationship with the National Association for Retarded Children. The American Psychiatric Association should proceed to such steps as are necessary to build these liaison relationships to the general purpose of identifying problem areas and delineating the roles of the several groups in coping with them and thereby strengthening the total common effort.

10. While the Joint Commission on Accreditation of Hospitals inspects and accredits hospitals which care for the mentally retarded, as it does hospitals which care for other mental disorders, its coverage is confined to bona fide hospitals. There is, in effect, no comparable inspecting and accrediting agency for all other types of residential and treatment facilities in the mental-retardation field. Nor have official standards been established for their operation, although the American Association on Mental Deficiency has developed such standards. The American Psychiatric Association should offer its assistance to the Joint Commission on Accreditation of Hospitals in furthering higher standards for the hospital care of retardates. It should further tender its good offices to the American Association on Mental Deficiency in furthering its work on standards development. With other organizations and agencies concerned, it should explore the need for a new inspecting and accrediting body to supplement the work of the Joint Commission by inspecting and accrediting non-hospital facilities for the retarded. Further, if such agency is indicated, the Association should be continuously involved in its operations. The Association's own Committee on Standards should direct its attention to these problems. In general the Association should seize upon every opportunity to play the role of catalyst in precipitating action programs designed to raise standards in the entire range of facilities for the mentally retarded.

CONCERNING RECRUITMENT AND TRAINING OF PSYCHIATRIC MANPOWER IN MENTAL RETARDATION

11. The starting point for a truly effective national medical program in mental retardation clearly lies in the training of the doctor. The situation calls for across-the-board acceptance in medical education of four principles:

a. That it is essential to encompass education in mental retardation in medical-student education, with special reference to incorporating instruction in mental retardation into the curricula of psychiatry, neurology, pediatrics and obstetrics.
b. That it is necessary to incorporate a solid body of learning about mental retardation into specialty training, again with special reference to specialty training in pyschiatry, neurology, pediatrics and obstetrics.
c. That effective education in mental retardation will require medical schools and residency training centers to establish or develop active affiliation with clinical facilities in mental retardation.
d. That competent training centers should develop and provide further opportunity for elective and board-approved specialization in mental retardation to guarantee

long-range advancement of clinical and research knowledge in the field.

Implementation of these four principles is essential if mental retardation is to be given the status, visibility and identity that will integrate it into American medical progress.

12. The encouragement of training in mental retardation at the undergraduate and graduate medical levels must not be taken as a plea for more "proprietary" instruction in a discrete subject area. It is rather a matter of reorienting teaching content and method to encompass an understanding of mental retardation in the context of teaching human biology or human growth and development. Every medical student today needs increased knowledge of the phases of human development, including consideration of the misdevelopment, maldevelopment or nondevelopment of children who may suffer from mental retardation. Instruction in the diagnostic and treatment problems presented by the mentally retarded should therefore begin, perforce, with an understanding of early childhood development, utilizing all of the conventional teaching methods, and reinforcing them with clinical demonstration and clinical work in pediatric, obstetric, neurologic and psychiatric clinical settings.

13. Medical education in mental retardation at all levels, graduate and undergraduate, must stress the critical roles played in the field by several key disciplines, particularly psychiatry, pediatrics, obstetrics, neurology, nursing, social work, psychology, rehabilitation, economics, the law and other behavioral and social sciences. Collaborative teaching relationships among them are required if each is to understand the role of the other. Emphasis should be placed on the use of such devices as interdepartmental coordinating committees in university teaching. It is auspicious that mental retardation as a subject is particularly well adapted to the inter-departmental collaborative teaching approach. The furtherance of this method in teaching may be expected to have many side-benefits in the teaching of human growth and development generally.

With specific reference to residency programs in psychiatry, every general psychiatrist, in the course of his three years of specialty training, should receive basic instruction in biochemistry, genetics, developmental neurology, neuropathology, social and intellectual growth, family guidance, communicative disorders and psychological measurement, with reference to their bearing on the etiology, treatment and prevention of mental retardation. Such instruction should be combined with clinical experience and should offer the resident opportunity for contact with the retarded child and his family, the problems they face, and the psychological adjustments they must make.

The American Psychiatric Association should offer all possible support to the Council on Medical Education and Hospitals of the American Medical Association, as the approving agency for psychiatric residency programs, in furthering the adequacy with which residency programs provide for training in mental retardation.

14. General psychiatrists who undertake career training as specialists have a particular responsibility for acquiring additional competence in the area of mental retardation. Since the first psychiatric contact with mental retardation is nearly always at the level of childhood, manifestly no child psychiatrist should be without training in the field. In general, training for psychiatrists in mental retardation should be carried on within the framework of approved child-psychiatry training centers in collaboration and affiliation with pertinent educational institutions. Every trainee should have significant experience in diagnosis, evaluation, treatment and rehabilitation of retarded children and their families. His training should also include planned instructional visits by trainees to residential centers for the retarded and to day schools and other specialized facilities, to give him experience in the broad spectrum of mental retardation from the mild to the profound, and these visits should be followed up with seminar discussions. Also some experience, under supervision, in consultative work with nonmedical agencies and facilities for the retarded is essential.

15. Because many disciplines are essential to the development and application of an effective national program in behalf of the retarded, each discipline must be involved in the education of the other if there is to be an effective teamwork approach to the problem. The "two-way street" principle should be applied in the education of all disciplines involved—that is, if the psychiatrist can contribute to the education of the psychologist, the nurse, the social worker, the special teacher and others, so can they enrich the education of the psychiatrist.

16. It is neither necessary nor desirable at this time to establish a new subspecialty examining board in mental retardation, comparable, for example, to the subspecialty board on child psychiatry of the American Board of Psychiatry and Neurology. Existing examining boards—particularly in psychiatry, child psychiatry and pediatrics, but also in neurology and obstetrics—can presently serve this function. It is of crucial importance, however, that existing boards hold candidates for certification responsible for demonstrating competence in the field of mental retardation.

17. There is need to expand opportunity for training in the field of mental retardation by making more scholarships and fellowships available. Liberal subsidization of postdoctoral fellowships and research career fellowships and professorships is particularly called for to stimulate young scholars to undertake specialized work in this field. Some fourth- and fifth-year residency stipends of-

fered by the National Institute of Mental Health should be specifically set aside for graduate research and teaching in mental retardation. That is, such stipends could provide for an additional year following specialization in child psychiatry. Stipends should be adequate to attract highly qualified candidates.

18. Reorientation of psychiatric education is fundamental to giving mental retardation its proper place in medicine. But this, of course, must be projected in a long-range plan. The immediate urgency is to mitigate gaps in existing knowledge among psychiatrists and other physicians. This can be done in significant measure by promoting and taking advantage of university postgraduate courses, seminars, conferences and institutes. It is especially helpful to psychiatrists to take courses in such fields as pediatrics, neurology and obstetrics which have orientational value in the field of mental retardation. We urge the district branches and members of the Association to stimulate, conduct and participate in such educational opportunities. Postgraduate courses offered by psychiatrists for nonpsychiatrist physicians should automatically devote a meaningful part of their curricula to the psychiatric aspects of mental retardation.

CONCERNING RESEARCH IN MENTAL RETARDATION

19. Historically, clinical and basic research in mental retardation is firmly rooted in the work of 19th century physicians who specialized in mental disorders, such as Itard, Pinel, Guggenbuhl, Seguin, Howe, Wilbur and others. The profession, however, in common with other behavioral sciences, has shown relatively little interest in subnormal functioning as a research area requiring specialized training and facilities. A recrudescence of psychiatric research in this field is a compelling need, and more so in the light of population growth, increase in numbers of brain-damaged individuals and the dramatic extension of the life span. Psychiatrists, for their part, can make particular contributions to interdisciplinary studies of the theory and measurement of intellectual function, of how social, cultural, emotional and economic factors operate in relation to misdevelopment, maldevelopment and nondevelopment of individuals, in cross-cultural and longitudinal studies of the mentally retarded—areas which have largely been neglected thus far in research enterprise. Because of the difficulty of coordinating all of the different elements in the university that should be harnessed to the task, there is need to establish additional research centers for basic and applied research in mental retardation staffed by a range of specialists needed to carry out a full spectrum of studies on the genetic, anatomic, metabolic, emotional, educational, social and other aspects of mental subnormality. It is auspicious that the Congress has already provided legislative authorization and funds to support several such centers, and psychiatry should join with others concerned in furthering the most effective utilization of these resources.

CONCERNING LEGISLATION

20. There is a vast array of federal and state legislation now affecting the management of the mentally retarded in our country having to do with poverty, vocational rehabilitation, public health, immigration and naturalization, guardianship, competency, criminal responsibility, civil service employment, education, aid to dependent children, training and the like. Furthermore, for every law there is an administrative complex governing its application by administration, regulation and interpretation. For example, the nation is now confronted with federal legislation which authorizes (and therefore facilitates and encourages) separate planning for the mentally ill, thus further complicating coordinated and cooperative endeavor in the field. There is an urgent need on the part of an appropriate agency to make a thorough study and analysis of legislation governing the management of the retarded, and to publish and keep current a manual on the status of legislation in the field for guidance of all professions concerned with the management of the retarded. Further, the entire legal structure should be examined from time to time, by a body of experts representing the disciplines most closely concerned, with a view to recommending such modifications as seem essential to support a progressive national program to cope with mental retardation. In sum, the legislative aspects of mental retardation present a vast and complex problem which no single agency can attack with a significant effect.

Nevertheless, the American Psychiatric Association should engage in all possible cooperative endeavor with appropriate government and private agencies to help develop an optimal legislative base for progressive federal, state and local programs in mental retardation. Specifically, the Association's Committee on Psychiatry and the Law should address itself to the formulation of contributory projects in this area which the Association itself might undertake with grant support from outside agencies. Such project formulations should be geared to make full use of outstanding American legal experts who have long since made known their own concern and understanding of the need. Finally, the Association should forthwith undertake an information program for its own members and colleagues in related disciplines concerning laws and regulations which make available financial support for research, training, construction and general program expansion in mental retardation.

CONCERNING NOMENCLATURE

21. The official DIAGNOSTIC AND STATISTICAL MANUAL—MENTAL DISORDERS (American Psychiatric Association, 1952) is inadequate as it relates to mental retardation. It should be updated as rapidly as possible to accord with modern concepts of mental retardation. When that is done, due attention should be paid to the nomenclature of the American Association on Mental Deficiency and recent formulations in the diagnosis and classification of childhood disorders.

CONCLUDING NOTE ON IMPLEMENTATION

The above principles and recommendations will be publicly announced and referred to all appropriate components of the American Psychiatric Association and to all interested national organizations and agencies for their information and for such action and follow-up as seems indicated to them.

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University of Iowa
College of Medicine

Clinical Pathological Conference No. 500

Oliguria, Uremia, Fever, Positive Papanicolaou Smear

RAYMOND F. SHEETS, M.D., Chairman,
CPC Committee
MRS. DONNA KENNEDY, Secretary

SUMMARY OF CLINICAL FINDINGS

A 48-year-old white woman was transferred to the University of Iowa Medical Center from her home hospital because of a two-week history of diarrhea and progressive vomiting. She had been in good health until about four weeks earlier. Then she developed some swelling of her left leg that was worse at night and subsided in the morning. There was no swelling of the right leg. The edema was treated with diuretics.

Two weeks before her admission she developed diarrhea, having four or five stools per day. The stools did not contain blood. She had some abdominal cramping that was relieved by the passage of stool. The diarrhea lasted for about four days.

One week before her admission she had begun having vomiting and some nausea. She had no hematemesis, but her vomiting became progressively severe and she was admitted to her home hospital. There she was treated with intravenous fluids, and then she was transferred to University Hospitals. While at her home hospital, she was found to be oliguric.

When she was admitted to University Hospitals, physical examination showed the patient to be an obese, somewhat lethargic and dehydrated woman. Her eyes, ears, nose and throat were normal. Her optic fundi were normal. The discs were flat. There were no masses in her neck, and her neck was supple. There was no venous distention. Her chest was clear to auscultation and percussion. Her heart was not overactive or enlarged, and the rhythm was normal. There were no cardiac murmurs. Her abdomen was obese, and there was some epigastric tenderness. The bowel sounds were hypoactive. There was no sign of abdominal fluid. The femoral pulses were normal, and there were no bruits. Her extremities were normal, showing no significant edema, and all of the pulses were palpable. There were no varicosities. The neurologic examination revealed generalized hyperactive deep-tendon reflexes, and a positive Chvostek sign. The patient had marked carpal pedal spasm. There was no lymphadenopathy.

Laboratory studies done on admission revealed a hemoglobin of 13 Gm. per cent, and a white blood cell count of 18,200/cu. mm., with 85 per cent neutrophils. Urinalysis revealed 1+ proteinuria, but no glucose or blood. Many white blood cells and epithelial cells were present. The blood urea nitrogen was 100, and the creatinine 16.2 mg. per cent. The serum sodium was 136, the potassium 4.1, the chloride 68 and the CO_2 38.1 mEq./L. The serum calcium was 8.7 and the phosphorus 10.8 mg. per cent. The alkaline phosphatase was 1.8 units. Postprandial blood sugars were 110 and 77 mg. per cent. Serum protein electrophoresis was normal. A quantitative urine culture revealed no growth. The stool was not grossly bloody, but was guaiac-positive. A plain abdominal x-ray was essentially normal. There was no free intraperitoneal air, and there was no abnormal small-bowel gas. There was a moderate amount of fluid within the stomach. A gas bubble was identified within the duodenal loop, but the duodenum did not appear dilated. A chest x-ray was normal.

After admission the patient continued to vomit, a nasogastric tube was passed, and she was treated with intermittent suction. She was severely dehydrated, and was initially given large amounts of intravenous fluids. For the first few days she was oliguric, with a urine output in the range of 200-300 cc./day, but as her hydration improved her urine output rose to 600-1,000 cc./day. She had multiple episodes of tetany, and they were treated with intravenous calcium. On the fourth hospital day blood-gas analysis revealed a pO_2 of 58 and a pCO_2 of 41.7 mm. Hg. The pH was 7.57. The CO_2 combining power was still elevated at 38 mEq./L. The serum potassium was 4 mEq./L.

On the eighth hospital day, the patient had an episode of low substernal chest pain that lasted for several hours. A serum glutamic oxaloascetic transaminase was 9, and the lactic dehydrogenase was 640. Her heart and lungs remained normal to physical examination, and her electrocardiogram was normal. By the tenth hospital day she looked and felt better, and the nasogastric tube was removed. She continued to have episodes of vomiting, however, and the nasogastric tube had to be reinserted. Examination of her abdomen was still unremarkable, except for questionable fullness in the right flank and right upper quadrant. She was not distended, and her bowel sounds were normal. She continued having difficulties with tetany, and needed repeated injections of calcium. On her sixth hospital day the BUN had risen to 225 and the creatinine to 23.1, but by the thirteenth hospital day the BUN was down to 108 and the creatinine to 13.5 mEq./L. Her serum calcium stayed in the range of 6-7 mg. per cent.

By the fifteen hospital day, the patient had become quite disoriented, and had slurred speech. There were no focal neurologic signs, and a spinal tap revealed normal pressures. The cerebral spinal fluid protein was 39 mg. per cent and the sugar was 35 mg. per cent. No cells were seen.

Since admission, the patient had had a minimal amount of vaginal spotting, but a pelvic examination revealed only a small punctuate ulceration about 0.5 cm. in diameter on the anterior lip of the cervix which was thought probably insignificant. The adnexa and parametria were normal. Cervical cytology showed atypical cells, possibly malignant.

The patient continued to be confused, and had incoordinated hand and arm movements and some rigidity of her legs. On the eighteenth hospital day she spiked a temperature to 104°F., and blood cultures grew out Proteus mirabilis, as did the culture of a urine which had been taken a week earlier. The cerebral spinal fluid culture revealed no growth. She was treated initially with streptomycin and later with chloramphenicol.

For the next week the patient continued to have fever up to 102°F., continued disoriented and confused, and slept much of the time. Nasogastric suction was continued intermittently, and she was maintained on intravenous fluids. Her urine output continued in the range of 1,000-2,000 cc./day. There was little change in her abdominal findings, and it was thought that she might have a right upper quadrant mass. There was some slight bulging in the flanks and some shifting dullness. Abdominal paracentesis was attempted, but no fluid was obtained. A repeat abdominal film was negative. A chest film showed some slight infiltration in the right upper lobe. The BUN remained in the range of 100-150, and the creatinine was in the range of 10 mg. per cent. Fur-

ther laboratory studies showed a negative lupus erythematosus prep, no Bence-Jones protein in the urine, and a negative direct and indirect Coombs. A 24-hour urine collection was negative for arsenic. The urinary porphyrins revealed a coproporphyrin of 14.2, a uroporphyrin of 6.6 and a porphobilinogen of 7.6 micrograms per total urine volume. The serum bilirubin was normal. A cephalin flocculation test was 4+ in 48 hours. A repeat upper-gastrointestinal series was essentially normal. The duodenal bulb and loop were normal, and the bolus of material passed steadily through the small bowel, and had passed into the colon within six hours. There were some edematous changes of the small bowel and mild dilatation, and those findings were thought consistent with a mild paralytic ileus.

Because of continued uremia, nausea, vomiting and disorientation, it was decided to do retrograde pyelograms as a means of further investigating the etiology of the patient's uremia. They demonstrated bilateral hydronephrosis that was worse on the right, with tortuous and dilated upper ureters. Material from the right collecting system was grossly purulent, and drained poorly. The patient was transferred to the Urology Service, where a right nephrostomy was done and a left ureteral catheter was left indwelling. With improved urinary output and relief of obstruction, the patient's BUN fell to 38 and her creatinine to 5.6 mg. per cent, but she continued to be disoriented. A repeat lumbar puncture was done, and it revealed an opening pressure of 150 mm. H_2O and a protein concentration of 69 mg. per cent. No cells were present. She also continued projectile-type vomiting of large quantities of material, and a repeat upper-gastrointestinal examination revealed what was thought to be an incomplete extrinsic obstruction of the transverse portion of the duodenum.

On the forty-third hospital day she was explored abdominally, and was shown to have a duodenal obstruction and bilateral ureteral obstructions from a retoperitoneal scar-like mass that engulfed both the upper ureters and the duodenum. A gastroenterostomy was performed, and a left nephrostomy was also done. Postoperatively the patient continued to deteriorate, and became quite febrile. She became hypotensive and was treated with antibiotics and steroids, but she died on the forty-sixth hospital day.

CLINICAL DISCUSSION

Dr. W. R. Anderson, Obstetrics & Gynecology: Mr. Singer will discuss the case for the students.

Mr. A. B. Singer, junior ward clerk: We feel that the clinical picture presented here can be attributed principally to uremia, which classically is characterized by weakness, anorexia, bloody diarrhea, nausea, vomiting, azotemia, hypocalcemia, hyperphosphatemia and polyuria. Although classically the uremic patient has metabolic acidosis, we explain this woman's metabolic alkalosis on the basis of hypochloremia secondary to prolonged vomiting. The causes of her tetany, we think, were hypocalcemia and alkalosis. Her initial symptom, edema of the left leg, may be explained as pelvic lymphatic obstruction. There is no evidence of arterial or venous insufficiency. The uremia and eventual duodenal obstruction were shown to have been secondary to obstruction by the retroperitoneal mass.

We believe her retroperitoneal mass was the basis for her illness and eventual death. Lymphoma is a major diagnostic possibility here. Such tumors may arise in any lymphoid tissue, but they are common in the retroperitoneal periaortic nodes. They enlarge by progressive, expansile, invasive growth, and by lymphatic dissemination. An abdominal mass can often be palpated, often before any subjective complaint of pain appears. Pain is a frequent symptom later in the course of the disease—often a persistent dull ache punctuated by episodes of colicky abdominal pain. Hepatic and splenic enlargement are commonly found as the mass grows and spreads, especially in Hodgkin's disease. Intestinal obstruction caused by pressure or bowel kinking may occur as a direct extension of this invasive mass. In one series 42 per cent of the patients had direct renal parenchymal involvement, 47 per cent had intravenous pyelograms showing lateral ureteral displacement, and 20 per cent had uremia and renal insufficiency with hydronephrosis, pyelonephritis or nephrosclerosis. Lymphosarcoma tends to involve the urinary tract bilaterally. If the tumor spreads to the main venous trunks, edema of the legs is common. Mesenteric and

hepatic involvement commonly result in ascites. This patient exhibited many of the features of a lymphoma. However she failed to develop anemia and the characteristic pain, and she had no hepatosplenomegaly. Grossly, lymphosarcoma is usually gray to pink in color and of fleshy consistency, but the mass in this patient was scar-like. Thus we feel the total clinical picture was not consistent with a lymphoma.

Another process to be considered is retroperitoneal fibrosis. This is characteristically a fibrous plaque covering the great vessels and extending laterally to envelop other retroperitoneal organs, notably the ureters. Although most often at the level of the sacropromontory, it has been found both lower in the pelvis and higher up in the abdomen, where it has been reported to involve hepatic vessels, the adrenals, the pancreas and the duodenum. The mass is a mixture of fat and fibrous tissue, and it becomes scar-like as the process continues. The usual symptoms are malaise, anorexia, weight loss, cramping, vomiting and low-back ache radiating to the genitalia and thighs. Patients usually exhibit fever, a slight leukocytosis and anemia. The physical examination is usually devoid of contributory findings. The protocol for this case makes no mention of ingestion of any compound known to provoke retroperitoneal fibrosis—namely methysergide, heavy metals, quinine, arsenic, sulfonamide compounds or cortisone. The protocol states that the intravenous pyelograms showed tortuosity of the ureters. It would be interesting to know whether the ureters were deviated medially, as they are characteristically in retroperitoneal fibrosis. In our opinion, however, that was not this patient's problem, for she did not develop the characteristic symptoms and gave no history of ingesting any of the compounds implicated in retroperitoneal fibrosis.

There are some other diseases which we think should be included in the differential diagnosis. The mass could have represented metastatic carcinoma from the breast or stomach. Clinically normal breasts and axillary nodes militated against those as primary sites, however, and repeatedly normal upper-gastrointestinal studies disproved a gastric carcinoma. The patient's elevated porphyrins make one consider lead poisoning, lymphomas, drug intoxication or carcinomatosis—all of which can present with elevated coproporphyrins, uroporphyrins and porphobilinogens. There was no family history to implicate porphyria, however, nor were there any of the classical systemic signs. We think the elevated porphyrins were secondary to metastatic carcinoma. Epidermoid carcinoma of the cervix is a likely diagnostic possibility. The chance of an active distant metastasis from a small endocervical lesion must be considered in spite of the seemingly normal pelvic findings. In one series of 108 autopsies on women who had had diagnosed cervical carcinoma, 9 per cent were found to have distant metastasis despite a lack of pelvic involvement. Also we might question the accuracy of this pelvic examination, in view of the patient's obesity and critical illness which made bimanual palpation difficult.

The patient's persistent vaginal spotting can be explained as due either to the cervical neoplasm or to uremia. The cervical lesion which was reported may have represented the only visible expression of her neoplasm.

An important clue to an existing cervical malignancy was the Papanicolaou smear. It was interpreted as showing atypical cells, possibly malignant. Urinary-tract complications are very common in disseminated cervical carcinoma. Bilateral ureteral obstruction and uremia were implicated in 71 per cent of the patients in one series, and were a direct cause of death in 55 per cent of those in another series. Retroperitoneal-node metastases have been found in from 7 to 40 per cent of the patients in different series. In the previously cited study of 108 cases, 40 per cent had leg swelling, 20 per cent had small-bowel obstruction, and 22 per cent had ascites.

Although this woman did not exhibit the most commonly seen pattern of metastasis, we feel that cervical carcinoma is the most plausible diagnosis. The cytologic studies and the visible lesion tell us that there was disease of the cervix. However the final diagnosis would have to be made by histologic study. The students' impression, then, is that this patient had an epidermoid carcinoma of the cervix which metastasized early and caused unilateral lymphedema of the leg, and later obstructed both the ureters and the duodenum. Eventually she became morbidly azotemic and hypocalcemic.

When surgery finally relieved her ureteral and duodenal obstructions, she was left with neurologic deficits and a high susceptibility to infection. Her advanced disease at the time of her second operation made even palliation impossible. Eventually she developed pneumonia and septicemia, and those were the causes of her death.

Dr. Anderson: Again we have been given a thorough and very concise examination of the protocol, for which we are very appreciative. For the staff, Dr. Richard Freeman will discuss this problem.

Dr. R. M. Freeman, internal medicine, Veterans Administration Hospital: The students have covered the case very well. I shall disagree, however, and say that this woman had retroperitoneal fibrosis, as opposed to cancer of the cervix, mainly on the basis of the last paragraph of the protocol. Rather than go through a detailed differential diagnosis, I should like to point out a few things in the protocol that might separate an acute renal process from a chronic one.

Initially this patient had swelling of her leg. Then, sequentially, she had diarrhea, abdominal cramping and finally some vomiting. When she was admitted to the hospital, she was oliguric. On physical examination, when she was transferred here, she was obese and dehydrated, her bowel sounds were hypoactive and she had marked carpopedal spasm.

I agree with the students that the tetany seen in this patient probably was a combination of hypocalcemia and alkalosis. Tetany, however, is a very complicated thing to understand. Classically, any tendency toward tetany is expressed by the ratio which I have put on the blackboard. It indicates that any tendency toward *increasing* serum potassium, *increasing* serum bicarbonate or *increasing* phosphate tends toward tetany. But a *decreased* calcium, magnesium or hydrogen ion also tends toward tetany. In this patient at least, we have four of the six abnormalities that would make tetany likely. It is also possible that magnesium abnormalities may have been present.

On laboratory examination, the hemoglobin was initially 13 Gm. per cent. That value points to a relatively acute renal process, as opposed to a very chronic one. It would be unusual for a patient with a creatinine of 16 mg. per cent not to be anemic if the renal disease had been going on for a prolonged period. I realize that this woman was dehydrated and that her dehydration may have increased her hemoglobin, perhaps slightly. But I think the renal lesion had been going on for days or weeks, as opposed to months. Urinalysis revealed 1+ proteinuria. The sediment was free of any red blood cells or red blood cell casts, and their absence points toward a tubular as opposed to a primary glomerular lesion. I assume that the 1+ proteinuria was consistent with other urinalyses which presumably were performed on this patient, and that her urinary protein was less than 1 Gm./24 hrs. The serum sodium was 136 mEq./L., the chloride 68 mEq./L., and the CO_2 38 mEq./L. Therefore she had an anion gap of about 30 mEq./L., which is the difference between the serum sodium and the sum of the chloride and the CO_2, and one could anticipate that she would have large amounts of phosphate and sulfate in the serum. Indeed the phosphate in this patient was 10.8 mg. per cent. I note that her serum calcium was really not particularly low, at 8.7 mg. per cent. Her CO_2 was quite high, however, and we can be almost certain that there was a metabolic alkolosis in this patient. It is likely that the amount of vomiting that she did was more than appears from the protocol. It also is probable that she had nasogastric suction for some time.

The alkaline phosphatase was within normal limits. Two postprandial blood sugars were 110 and 77 mg. per cent. If a glucose-tolerance test had been performed, it is quite likely that it would have been abnormal. We have done glucose-tolerance tests on many patients with uremia, and when the creatinine gets much above 10 mg. per cent the curve is invariably abnormal. That is true in acute uremia as well as in chronic uremia, however, so that information does not help one much in a differential diagnosis. The serum protein electrophoretic pattern was normal. That is nice, for statistically it helps us rule out such diseases as lupus erythematosus, which always comes up at these meetings, or multiple myeloma or bacterial endocarditis. At least it cuts down the statistical likelihood of those diseases right away.

The initial quantitative urine culture revealed no growth, and that is an important point for us to look at. It suggests that the pa-

tient came into this hospital without evidence of urinary-tract infection, though we know from the protocol that she later showed evidence of it. I should be much surprised to learn that a catheter had not been placed in this woman sometime during her 46 days of hospitalization. The problems of catheterizing a patient like this are repeatedly brought up, and there certainly is no doubt that there should always be good urological reasons for passing a catheter. Simple collection of urine, please note, is not a good urological justification. In any event, the negative urine culture does not point to chronic asymptomatic pyelonephritis as the basis for this patient's disease.

One of this woman's major problems, from the beginning, was continued vomiting, and it was difficult to keep her well hydrated for that reason. A rather severe metabolic alkalosis was evident on the fourth day, and metabolic alkalosis tends to aggravate any tendency toward potassium deficiency. In spite of a serum potassium of 4 mEq./L., I think she was potassium-deficient. Surely if we had had a piece of muscle tissue to examine at that time, it would indeed have shown her to be potassium-deficient.

On her eighth hospital day she had an episode of low substernal chest pain. That symptom was not mentioned again in the protocol. One of the many possible causes for chest pain would be uremic pericarditis. It can occur in patients with either acute or chronic renal failure. There often is a pleuritic component in the chest pain. The friction rub may not be apparent when the chest pain is first complained of, and for that reason the heart must be listened to repeatedly. It would not surprise me if some evidence of fibrinous pericarditis had been found on postmortem examination in this woman, even though death occured some 40 days following her chest pain.

We note that her BUN tended to rise and then to fall, but that it never got into a normal range. At least by the fifteenth day her creatinine clearance was still distinctly low. Then began a series of problems which had to do with disorientation, slurred speech and mental difficulties. They are significant, but I cannot come to grips with them. At one point her spinal-fluid sugar was 35 mg. per cent. In the absence of any cells in the spinal fluid, she may well have had some hypoglycemia at that particular time. Documented hypoglycemia is of some importance since a number of retroperitoneal masses, especially sarcomas, are characterized by hypoglycemia. They tend to be quite large and slow-growing. But in this institution, I am sure, the possibility of a retroperitoneal mass would have been looked into quite thoroughly, and therefore I exclude a retroperitoneal sarcoma that produces insulin-like activity as a cause for this woman's illness.

Then we have the problem of vaginal spotting, and the consequent possibility of cervical carcinoma. I think it would be unlikely at this hospital, in a woman who presented with as much bilateral obstructive disease as this one had, for a carcinoma to go unrecognized. It is primarily for that reason that I am unwilling to accept the diagnosis of cervical cancer, even though there is nothing in the protocol which is incompatible with it. The atypical cells, I think, are also somewhat questionable. From time to time we encounter the question of whether uremia *per se* can affect the cytology of various cells, but I am willing to guess that the atypical cells were not evidence of malignancy.

Finally the patient was disoriented, and on the eighteenth day she spiked a temperature of 104°F. Blood cultures revealed Proteus, an organism which had previously been obtained from her urine. As I said before, I think it likely that she was catheterized and that the catheter may have been partly responsible for her infection. However, as we learned subsequently, she was hydronephrotic, and since any obstructive disease tends toward infection, the Foley catheter may not have been the total explanation. It is important to remember that uremia is a syndrome which is often characterized by hypothermia. The chronically and acutely uremic patient may have a temperature of 95 or 96°F. in the morning. It is not uncommon for such an individual to have a serious infection in the absence of a severe elevation in temperature. I have seen a number of staphylococcal septicemia patients who had temperatures of less than 100°F. So it is conceivable that this woman may have had her infection prior to the day on which she spiked a temperature of 104°F.

Treatment is exceedingly difficult in uremic

patients. Almost every antibiotic is contraindicated in uremia, for one reason or another. Many of the antibiotics produce nephrotoxicity, neurotoxicity and ototoxicity. If one reduces the dose in an effort to avoid these problems, he must worry about whether the dose is sufficient to inactivate or eradicate the particular organism. Because of these problems, there is no doubt that the prevention of such an infection is far superior to its treatment.

The patient continued to have fever, and finally a mass was felt in the right upper quadrant. I assume that the mass was a hydronephrotic right kidney. Considerable attention was given also to possibilities of acute intermittent porphyria, and searches were made for a variety of intoxications such as lead and arsenic poisonings. The coproporphyrins and uroporphyrins were normal. Porphobilinogen is supposed to be negative in the urine. I don't know what a 24-hour porphobilinogen means, however. I am used to the old-fashioned Watson-Schwartz test in which one sees a color or he doesn't. But there are a variety of ways of getting a false positive test result even for porphobilinogen, and I assume that this patient did not have acute intermittent porphyria.

Finally we get down to problems of the gastrointestinal tract, again, and the problems of a paralytic ileus. The next-to-last paragraph of the protocol says: "Because of continued uremia, nausea, vomiting and disorientation, it was decided to do retrograde pyelograms." I must comment that that decision came late in the case. I hope it wasn't I who saw this patient and proposed delaying the pyelograms. Certainly in a woman such as this one, who had no evidence of chronic renal disease, and very little evidence of glomerular damage—by this I mean that her proteinuria was moderate and that she had no red blood cell casts—the possibility of obstructive disease has to be very high. To deny a patient this sort of evaluation in the absence of a good known diagnosis, I think, is wrong. It may be difficult to deny one even in the presence of glomerular disease.

We can say with certainty that the retrograde should have been performed earlier in this case. In any event, when the retrogrades were done they showed hydronephrosis. I should like to see the x-rays now, because medial displacement will suggest retroperitoneal fibrosis. If the displacement is anterior and lateral, we think more of the tumor group. Perhaps the radiologist can decide the issue for us.

Dr. J. T. Keller, Radiology: This is from a retrograde study done about 3½ weeks after the patient's admission. It shows considerable hydronephrosis bilaterally, with dilated renal pelves and calyces. In general the ureters follow quite normal courses on both sides all the way down to the bladder. There is a little dilatation on the right side, and a little bit of kinking. The renal pelvis on the right side shows considerable irregularity as well as enlargement, and some of the lower-pole calyces are not well visualized.

This is from a retrograde study done 10 days later. I believe it was at the time a drainage tube was put in on the right side. Again we see the continued right hydronephrosis and the irregularity of some of the calyces. I believe that these are all we have in the way of retrogrades.

Dr. Freeman: There is mention of a pulmonary infiltrate visible on the chest film. Was there any distinctive quality about that infiltrate that might suggest something such as lymphoma or Hodgkin's?

Dr. Keller: The only chest film with an infiltrate is one that was taken much earlier than the retrograde studies. It showed an infiltrate in the uppor portion of the right lung field. The heart and great vessels were within normal limits for the patient's age, and the lungs were otherwise normal. There were later films that were normal, showing that the pneumonia on the right side had cleared up. We don't have any films of her during the terminal portion of her illness when she developed a severe pneumonia.

Dr. Freeman: I think the ureters are medially displaced. I can say this because I don't look at the ureters as carefully as urologists do! In any event, following the drainage on the right side, the patients did improve. As for the chemistry, her BUN decreased and her serum creatinine decreased to 5.6 mg. per cent. However she continued to be disoriented, and the cause of that disorientation was never really established. She also continued vomiting, and

it was then that the suggestion of incomplete extrinsic obstruction of the transverse portion of the duodenum was made. She finally was explored, and as we have been told, "A retroperitoneal, scar-like mass engulfed both the upper ureter and duodenum." I think that statement suggests retroperitoneal fibrosis a little more than tumor, but your guess is as good as mine.

If she indeed had retroperitoneal fibrosis, the question now is, "Why did she die?" I am willing to grant that if she had cancer of the cervix and it was severe enough to cause bilateral obstruction, she doubtless had metastases and a number of reasons for dying. Retroperitoneal fibrosis, however, is a relatively benign disease if it is diagnosed and treated. It was finally diagnosed and treated, although perhaps a little tardily. I have never seen a patient with retroperitoneal fibrosis. The first American case was reported in about 1948, although evidence of the disease had appeared in the French literature as early as 1905. It is a rare urological problem, and perhaps no more than 150 cases are known. It is often considered an idiopathic disease. It can be confused with reticulum cell sarcoma or Hodgkin's disease, and it has been associated with regional enteritis and a number of other entities such as lupus.

We also should like to know about the possibility of the patient's having ingested methysergide (Sansert). There now are at least 27 cases of retroperitoneal fibrosis that have developed following the ingestion of Sansert, and if the patient had a history of migraine, I think Sansert ingestion should be even higher on the list. The association with Sansert is of some importance clinically, since fibrosis spontaneously disappears following discontinuation of the drug.

In conclusion, I think this woman had retroperitoneal fibrosis. The cause of her death is impossible to determine from the protocol. There was a critical period extending from her forty-third to her forty-sixth hospital day in which all sorts of electrolyte abnormalities could have occurred. It is possible that she might have had a post-obstructive diuresis and developed a critical deficit of certain electrolytes such as sodium and potassium. However that is only one of many possible explanations for this woman's death. I think she had retroperitoneal fibrosis and a hydronephrotic right kidney. There will be some evidence of infection on the right side.

Dr. Anderson: One of the threads which run through this protocol and which haven't been discussed as a primary symptom consists of the nausea and vomiting that this patient experienced. A number of x-rays were performed in an attempt to determine the cause of the nausea and vomiting. Dr. Keller, I wonder whether you have the pertinent films, and whether you might discuss them now. I might add that all the assumptions made by the discussants were correct.

Dr. Keller: These are some films taken during the patient's first upper-gastrointestinal examination. This one shows the dilated duodenal bulb. We felt that the stomach itself and the bulb were within normal limits. The proximal portion of the duodenal loop was somewhat dilated. That finding was interpreted at the time as showing, perhaps, some mild paralytic ileus, but on reviewing the examination we discovered that we never had seen the distal portion of the duodenum on any of the films. This is a lateral film, and it again shows the stomach and bulb to have been normal, but we don't see the distal portion of the duodenum. This is a film taken an hour or so after the beginning of the exam. There was by no means a complete obstruction, since the contrast material did go on into the small bowel, showing a small amount of widening of the valvulae conniventes in the proximal small bowel. There was considerable gas in both the colon and the small bowel, and we felt it probably represented a mild paralytic ileus. Perhaps we attached too little importance to the fact that we didn't see the distal duodenum.

This next examination was done approximately two weeks after the first one. It was the last examination that we did on the patient in the way of a gastrointestinal examination. It is a lateral film, and again it failed to show the distal portion of the duodenum. There was extrinsic pressure upon the duodenal bulb and the duodenum, and they were pushed somewhat forward. This is a later film taken during the same examination, and it shows that there

still was not a complete obstruction, since we do see some contrast material in the small bowel farther down on this later film. We feel that there were extrinsic pressure and at least partial obstruction of the distal portion of the duodenum on this examination.

Dr. A. J. Levine, Pathology: This was a very interesting and unusual case from the two standpoints just discussed. The gross findings were limited essentially to three organs. The lungs showed bilateral congestion, edema and consolidation in the lower lobes consistent with some vascular congestion and a pneumonic process. In the abdomen there was evidence of a functioning gastrojejunostomy. As previously noted there were no fibrous or adhesive bands at the time of surgery. There was some scaring down in the lower third portion surrounding each of the ureters, and it extended down to the ureterovesical junctions, but a probe could be passed through each ureter into the bladder. As previously observed, excessive fibrous tissue surrounded the ureters and other structures, but did not obstruct them completely. Finally, the third organ—the uterus—revealed a firm anterior lip with a five-millimeter ulceration on the surface. A Papanicolaou smear demonstrated malignant cells of both epidermal and glandular origin. Histologically this case showed two individual malignant cervical processes occurring simultaneously—an invasive epidermoid carcinoma of cervical-glandular origin, and an adenocarcinoma. Both presumably were caused by the same carcinogenic agent, whatever it may have been. Cervical-vascular and lymphatic spaces contained clusters of malignant cells, typically adenomatous. The tumor was unusual in that the widespread metastases were all from the adenocarcinomatous portion, despite the fact that the epidermoid carcinoma appeared equally invasive. Identical tumor cells were found within the cervix and the pelvic and periaortic lymph nodes. A corpus albicans within the ovary demonstrated adenocarcinoma, as did uterine myometrium.

What can be said about these tumors? Most people feel that they do, in fact, occur separately without intermixing. In a review of 2,500 cases of cervical carcinomas, Glucksmann found that the commonest tumor was the epidermoid variety (about 95 per cent), and that the remaining 4 or 5 per cent were divided between adenocarcinomas of the cervix and other unusual varieties. In women with cervical carcinomas and high hormonal levels, especially during pregnancy, this series showed that approximately 50 per cent of these tumors were of this mixed variety. When such tumors are treated, the survival rate is approximately 10 to 20 per cent, depending on which series you read about, as opposed to over 60 per cent of epidermoid carcinomas similarly treated.

Between the pancreas and the duodenum there was dense, fibroblastic tissue containing adenocarcinoma cells. Both ureters were surrounded by similar tissue, and again clusters of adenocarcinomas were intermixed with the fibrous tissue with a lack of viable tubular acute and chronic pyelonephritis. The distal pyramid showed tubular atrophy and dense fibrous tissue with a lack of viable tubular structures. This probably occurs following pressure atrophy because of hydroureters and hydronephrosis, the basic disease process being partial constriction of the ureters. Lymphatics in the lung contained nests of adenocarcinomas, but there was no other gross or microscopic evidence of metastasis to the lungs. Severe bronchopneumonia was observed bilaterally in the lower lobes.

Dr. Anderson: I think we can then say that the primary diagnosis was a type of retroperitoneal fibrosis, a desmoplastic change secondary to cervical carcinoma and its metastatic spread. Certainly both of the discussants are to be complimented for arriving at correct diagnoses.

Dr. Culp had a hand in working with this particular patient, and we should appreciate his telling us his approach to this problem of ureteral obstruction and the way in which he would have managed the patient initially.

Dr. David A. Culp, Urology: I think we are being very kind, and we shouldn't be. First of all we have to come to recognize a disease known as idiopathic retroperitoneal fibrosis. Today we have spoken just of "retroperitoneal fibrosis." We ought to be more specific. The process described today did not represent idiopathic retroperitoneal fibrosis—absolutely not. There were several factors which made it impossible to classify this case as idiopathic retroperitoneal fibrosis. Dr. Ziffren was with me when we exposed this patient, and he will

confirm the finding that there was a transmission of this process across the peritoneum. Idiopathic retroperitoneal fibrosis *never* crosses the peritoneum. There was a tongue of fibrotic reaction—probably a reaction to the infiltrating carcinoma—which had come up through the peritoneum and had formed a band around the duodenum, much as if one had put an elastic band around it, a very narrow, small band, and it had produced the bowel obstruction.

One thing that probably wasn't clear in the protocol was that the vomiting was projectile and massive, and that it occurred every three or four hours. That information, I think, might have given you a clue to the intensity of the upper-gastrointestinal obstruction.

The second point I wish to make is that approximately 26 days elapsed before the simple things were investigated. Certain findings should have made an investigation of the urinary tract urgent. First, the patient had diarrhea and vomiting. Although those are not genitourinary-tract symptoms, except in the presence of uremia, patients with renal failure do have the primary symptoms of nausea and vomiting. Symptoms which suggest disease in the genitourinary tract should make one think of renal failure. Another finding was oliguria. Some investigation should have been undertaken in an effort to find out where the urine was—why it wasn't coming out, or whether the difficulty was a failure in the production of urine. Three and a half weeks should not have gone by before that diagnostic venture was undertaken.

I should like to disagree with some of Dr. Freeman's statements with regard to the catheter. What I have to say may explain why this investigation was not carried out. You fear the catheter. But let it be understood that when there is obstructive disease one must find out about it. If there is oliguria—a decreased urinary output—one had better find out whether it represents lack of production or a failure of delivery. The best way of finding out is by means of ureteral catheters, not by means of excretory urograms in the presence of an elevated blood urea nitrogen. In this case we had to utilize the catheter and retrograde pyelograms. I think the main point in the care of this patient is that we failed to investigate the cause of her oliguria promptly!

Dr. Anderson: Because the hour is late I am going to paraphrase one of the comments that Dr. Ziffren made to me. The differential diagnosis between idiopathic retroperitoneal fibrosis and fibrosis associated with a malignant process was clinically apparent at surgery in this patient because an idiopathic retroperitoneal fibrosis should not give rise to intraperitoneal obstructive lesions.

Dr. Culp: We had biopsies at the operating table, and there was no question about the malignancy. The patient's terminal event was predicated on the problem of disseminated malignancy.

Dr. Anderson: This has been an instructive case for us all. Thank you.

SUMMARY OF NECROPSY FINDINGS

1. Mixed epidermoid adenocarcinoma, cervix
2. Metastases to pelvic organs, abdominal viscera, lungs and bone marrow
3. Gastric outlet obstruction, fibrosis with metastatic tumor
4. Bilateral partial ureteral obstruction, fibrosis with metastatic tumor and hydronephrosis
5. Acute and chronic pyelonephritis, bilateral
6. Postoperative gastrojejunostomy and bilateral nephrostomy
7. Bilateral bronchopneumonia, severe
8. Nodular thyroid
9. Fibrocystic disease, breasts
10. Severe loss of cerebellar Purkinje cells and focal loss of cerebral neurons.

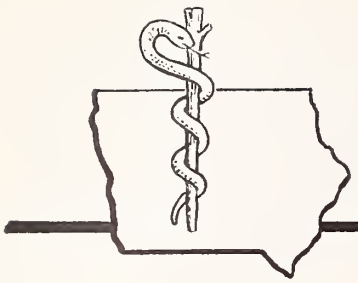
STUDENTS' DIAGNOSIS

Cancer of the cervix with metastases.

DR. FREEMAN'S DIAGNOSIS

Retroperitoneal fibrosis.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Ave., West Des Moines, Iowa 50265. Communication is a necessity: Do help us keep our mailing list up to date. You are our best source of accurate information.



Editorials

DESIDERATA*

Go placidly amid the noise and haste, and remember what peace there be in silence. As far as possible without surrender be on good terms with all persons. Speak your truth quietly and clearly; and listen to others, even the dull and the ignorant; they too have their story. Avoid loud and aggressive persons, they are vexatious to the spirit. If you compare yourself with others, you may become vain and bitter; for always there will be greater and lesser persons than yourself. Enjoy your achievements as well as your plans. Keep interested in your own career, however humble; it is a real possession in the changing fortunes of time. Exercise caution in your business affairs; for the world is full of trickery. But let not this blind you to what virtue there is; many persons strive for high ideals; and everywhere life is full of heroism. Be yourself. Especially, do not feign affection. Neither be cynical about love; for in the face of all aridity and disenchantment it is perennial as the grass. Take kindly the counsel of the years, gracefully surrendering the things of youth. Nurture strength of spirit to shield you in sudden misfortune. But do not distress yourself with imaginings. Many fears are born of fatigue and loneliness. Beyond a wholesome discipline, be gentle with yourself. You are a child of the universe, no less than the trees and the stars; you have a right to be here. And whether or not it is clear to you, no doubt the universe is unfolding as it should. Therefore, be at peace with God, whatever you conceive Him to be, and whatever your labors and aspirations, in the noisy confusion of life keep peace with your soul. With all its sham, drudgery and broken dreams, it is still a beautiful world. Be careful. Strive to be happy.

* Found in old Saint Paul's Church, Baltimore; dated 1692.

TELL IT LIKE IT IS

Maybe everybody is getting a bit fed up with the protest business. Maybe not. But either way, one thing is fairly certain—nobody is going to pay much attention to this tepid protest. Next time we'll go at it differently—stop shaving and bathing perhaps, or take to the streets, or camp out in someone's office.

To begin at the beginning: Here it is the era of dissent, and we seem to be more or less left out. Perhaps we do complain a little now and then about this and that, but not in a truly meaningful way. Isn't it high time that we changed? Isn't it high time for us to join the protest movement and tell it like it is?

A poet has written:

> "Let's go downtown and riot today
> It's such a lovely day.
> We'll picket and shout—
> Who cares what about—
> We'll think of something on the way."

But poet or no poet, good day or bad, you just can't join the protest movement without having something to protest about, or dissent from. It is not required that a protest be rational, reasonable, or even sensible, but it must be contemporary, it must be relevant, and it must be sophisticated, whatever that means. Under these ground rules, it would seem to be permissible to protest against cancer chemotherapy, for without question such chemotherapy is contemporary, it is relevant, and it is sophisticated, whatever that means. It qualifies, so. . . .

The fundamental point involved in this dissent is not that chemotherapy is used in the treatment of cancer, nor that it still is in the experimental stage, nor that it frequently imposes a futile and frantic regimen of blood counts, reactions, fear of reactions, and trips to medical centers for evaluation and re-evaluation, nor that it often falls somewhere between

useless and practically useless. (Please don't object and try to point out the exceptions, the successes with choriocarcinomas, leukemias, and lymphomas. We know all about that. So what? This is a protest, man!) No, none of these considerations ruffle our tranquility or even stir a whisper of dissent.

Nor can it be denied that, somehow, new ideas must be weighed and new drugs tried—and tried again and again—for a single success or failure may be meaningless, whereas a series of cases may be of inestimable significance. This we admit.

However, the fundamental point that does generate deep concern—the abrasive core of the protest—although imprecise and hard to come to grips with, is this: What does the patient understand about the proposed treatment? Does the patient realize that no one with cancer has ever been *cured* by the chemical about to be used? Does he know that the palliation, if any, may be fleeting? Does he know that many five- and ten-year survivals with chemotherapy can be matched by five- and ten-year survivals without chemicals—apparently the result of biologic resistance alone? Or does he know and has he heard only what, in desperation, he wants to know and hear? That is the pertinent point. That is the key. That is our credibility problem.

Doctors and patients alike are trapped by this therapeutic escalation. There is but little chance that a doctor, any doctor, trying to combine compassion and candor, can prevail against a fruitless quest and trial of chemotherapy when others, near and far, forge ahead first with one chemical then another. The sin lies not in the chemicals but in the creation of false hope. Hope itself is truly precious, but false hope is tragic.

How then can we extricate ourselves from this dilemma of chemotherapy? Well, maybe we can't. This is an age of problems without solutions. Anyway, cool it baby. The protest is about over. Beautiful, though, if some of those other cats and their groovy protests would fade from the scene as quickly.

—DANIEL F. CROWLEY, M.D.

THE PHYSICIAN AND TRAFFIC SAFETY

When a physician sees an automobile accident or an accident victim, or reads in the newspaper about traffic fatalities for such a period as our recent holiday weekend, I am sure he asks himself whether there is anything that physicians can do, either individually or as a group, to brighten this discouraging picture. During 1968 at least 100,000 people will be killed in auto accidents throughout the world, and about half of these deaths will occur in the United States. And as if that weren't serious enough, there are about 2,000,000 injuries in auto accidents each year, and about 160,000 of them result in permanent impairments of some degree. By projection, it can be estimated that about 10 per cent of our population is destined to be either killed or injured in automobile accidents during the next 15 years!

A recent study by McFarland, Ryan and Dingman has shown that injuries due to auto accidents can be analyzed by the same methods that are used to study the incidence and causes of disease.[1] The epidemiology of auto accidents includes studies of the host, the agent, the environment and the interrelationships of these. We must have a susceptible host, an inciting agent and a predisposing environment.

Automobile accidents are primarily an affliction of young males. About half of the 53,000 people killed in motor vehicle accidents during 1967 were between 15 and 30 years of age. One of every five motor vehicle deaths involved a male between 15 and 24. Well-trained drivers have fewer accidents, and with the advances in teaching people to drive under simulated conditions, and with better understanding of the teaching process, we should be able to train drivers better than they have been trained in the past. Certainly all first-licensees should have had some formal driver's training. Accident-proneness is a definite factor. Many accident victims are repeaters. These persons show a poor adjustment to the social and personal demands of life situations.

Estimates of the importance of alcohol as a causal factor in accidents have recently been revised upward. It is now thought that in about

50 per cent of the total fatalities alcohol is a causal factor. Furthermore, of the alcohol-related accidents, alcoholics (not social drinkers) account for more than half. Education and punitive measures may influence social drinkers, but there is little chance of preventing accidents involving true alcoholics by those means. All authorities in this country agree that a blood level of over 0.1 per cent alcohol indicates that the person is a dangerous driver. Three average drinks within a short period will raise the blood alcohol to this level. An attempt was made in the last Iowa Legislature to fix 0.1 per cent as *prima facie* evidence of intoxication, but the measure did not pass. Iowa passed an Implied Consent Law several years ago, but did not spell out clearly the means to be used in obtaining blood samples and set no blood-alcohol level as presumptive evidence of intoxication. Our law also allows tests of urine, breath and saliva, but no tests involving breath analysis have been used in Iowa.

The extent to which serious illnesses other than alcoholism are causes of traffic injuries and fatalities is uncertain. Certainly a driver with uncontrolled diabetes or epilepsy, or a driver with serious cardiac disease is a hazard on the highway because of the possibility of impairment of consciousness. Of course treatment and control of disease in these people may make them safe drivers. Elderly members of our population may show serious retinal degeneration impairing their vision, or there may be impairment of their central nervous system function. However, despite extensive cooperative efforts between medical authorities and licensing authorities, adequate criteria for disqualification have not been worked out. For instance, how poor must vision be for disqualification? How can we test the elderly to make sure their reactions are prompt enough to make them safe drivers on our modern highways?

The American Medical Association has compiled the following list of conditions justifying medical review prior to issuance of a license to drive:[2]

I. a. Corrected vision of less than 20/40 in the better eye, and/or a visual field of less than 140 degrees horizontally. In general, all recipients of aid under programs for the blind, individuals receiving Internal Revenue Service exemptions for visual loss, and all applicants with obvious uncorrected visual or hearing problems.

b. Known or obvious heart or lung defects, such as a "heart attack" during the past year, shortness of breath when resting, blue discoloration of the nails, swelling of the ankles, or audible wheezing.

c. Nervousness or tenseness obviously beyond that evidenced by the usual applicant.

d. Severe arthritis, muscle weakness, or skeletal and amputation deformities, which are likely to interfere with movements necessary for safe driving.

e. Various neurological defects, partial paralysis, evidence of seizures and blackouts. (Persons with neurological disorders, such as epilepsy, should not automatically be excluded from driving, since many whose disease is well controlled can be safe drivers. Medical examination nonetheless is indicated.)

f. Diabetes involving treatment with insulin, but where no medical evaluation has been made in the past year.

g. Chronic alcoholism, drug addiction, or use of narcotics which are not medically prescribed.

h. Gross and severe obesity.

i. Severe mental disturbances, especially sustained hostile and aggressive behavior, or exaggerated and prolonged periods of depression. (This is, however, an extremely difficult determination, and the lay examiner should concern himself only with obvious and gross disturbances.)

j. Personal involvement in circumstances which may justify medical evaluation. These may include (1) involvement in multiple accidents or in several moving traffic violations within a short calendar period, and (2) placement of the person in an "assigned risk" pool for insurance underwriting because of refusal by various commercial carriers to assume the risk. (An exception to this is when the driver is placed in such a pool only because of youthfulness.)

II. a. Mental retardation or learning achievement below the ability to read. (This should not be confused with lack of familiarity with the language, as in recent immigrants or se-

questered older nationality groups. This may, however, render such individuals unable to operate a vehicle safely because of an inability to read road signs.)

b. Existence of multiple impairments. (While a single impairment might not render the individual incapable of operating a motor vehicle safely, the combination of several such impairments might.)

c. A short-term impairment. (Usually such impairment can be considered as only a temporary limitation to driving. It may be advisable, however, to require a medical examination, since there may be long-lasting or permanent effects.)

d. Chronic conditions. (These should be considered to the extent that they cannot be compensated for by medication, glasses or appliances.)

e. Advanced age. (Age, alone, should not be a limitation, but medical evaluation is indicated more frequently in maturing years. Older drivers should be advised to avoid night-driving when they may be blinded by oncoming lights, and at dusk or in inclement weather when the amount of light is limited.)

f. Other conditions. (All of the medical conditions which could affect driving safety cannot be enumerated, and the lay examiner will have to depend upon his training, knowledge and experience.)

As you can see from the foregoing list, there is considerable vagueness of terminology, and it is very difficult to draw hard and fast lines between conditions which would disqualify a driver and those which would not disqualify him. This list has been expanded considerably in an AMA publication entitled "Medical Guide for Physicians in Determining Fitness to Drive a Motor Vehicle,"[3] which is available to doctors of medicine on request. Another excellent booklet which covers the same material in a somewhat different way is the "Guide for the Identification, Evaluation and Regulation of Persons with Medical Handicaps to Driving," by Julian A. Waller, M.D., M.P.H.[4] Anyone interested in this problem will find a careful reading of these two booklets invaluable.

There are many environmental influences on highway safety. Our modern interstate throughways seem to be the sites of fewer accidents, but those that occur on them are usually serious. Because of the higher speeds and the increased complexity of driving, the marginal driver may be confronted with dangerous situations frequently on such roads. Poor driving practices such as following too closely, passing in unsafe situations, etc., when combined with poor road conditions, can cause serious accidents. Twilight is a treacherous time; two-thirds of all fatal accidents occur at twilight or in the night.

Studies of injuries in general are interesting from a medical point of view. Injuries result from abnormal exchanges of energy between persons, agents and the environment, and they may be prevented through the control of that energy at its source. For instance, we can fairly well prevent electrical injury, and to some extent we can prevent chemical injury. To prevent injurious automobile accidents, the occupants of the vehicle must be insulated or protected against the kinetic energy involved. The engineer and the surgeon must cooperate in solving this problem. When an automobile strikes another automobile or an immovable object, the kinetic energy is dissipated during two successive steps. The first is the collision between the vehicles or between the car and the fixed object. The second is the subsequent collision between the occupant(s) and some part of the interior of the car (unless ejection takes place). The first of these dissipations produces damage to the vehicle and the second causes damage to the occupant(s). Of course collisions should be avoided, but in any event vehicles should be designed to dissipate forces over a longer period of time. The kinetic energy of the occupants must also be dissipated slowly and over as large an area as possible. This can be done by such means as seat belts, padded dashboards, collapsible steering wheels, etc., rather than sharp-edged dashboards, projecting knobs and rigid steering columns.

To help prevent automobile accidents from occurring, the engineer can provide good handling and operating qualities, quick and accurate maneuverability, good vehicular stability, easily operated and identified controls, etc.

Common-sense reasoning can be misleading. It is *not* safer to be thrown clear during an accident. It is much better to remain inside the

car. Seat belts rarely produce injuries, even in severe crashes, nor will they trap the occupants if the car falls into deep water. Entrapment accidents are very rare. One's chances of survival are much greater if he is wearing either a lap belt or a three-point shoulder belt, provided that the car has door locks strong enough to prevent ejection of the occupants.

Automobile manufacturers are conducting extensive research on the mechanisms of automobile accidents. By using instrumented dummies, they are able to study the physical forces that bear on human beings in automobile crashes. There are marked differences between injuries incurred by pedestrians and by car occupants. Pedestrians are not run *over;* they are run *under.* This results from the fact that the pedestrian's center of gravity is above the bumper or the hood of the car. When a pedestrian is struck, he is flipped up into the air, and his head successively strikes the car and then strikes the road behind the car.

Early studies showed that occupant-ejection was a common cause of serious injuries. Doors opened on impact, and fatal or serious injuries were sustained much more frequently by the ejected passengers than by those who remained in the car. Starting in 1955, door locks were improved, markedly decreasing the frequency of ejections.

There is a fairly good correlation between speed and injury. In accidents that occurred at speeds below 50 m.p.h., the frequency of serious injuries varied between 2 and 8 per cent, but in those that took place at speeds over 50 m.p.h., the frequency varied between 12 and 40 per cent. When a car stops suddenly, the occupant continues his forward movement in the seated position until he hits whatever is in front of him. His knees hit the bottom of the instrument panel, and his body and torso go up and forward. If he is the driver, his chest hits the wheel and his forehead hits the windshield. The windshield produces more facial injuries than does any other part of the vehicle. Recent changes in the construction of windshields have remedied these difficulties to some extent. The second most common mechanism of injury is the impaling of the driver on the steering column. Multiple injuries, of course, are common. Thirty-five per cent of victims sustain an injury to a single body area; 30 per cent to two body areas; and the remaining 30 per cent to three or more body areas. The head is almost always one of the areas injured. When a lap belt has been used, the upper part of the body will lurch forward at the time of the accident. The seat belt protects the knees, but not the head and thorax.

In 1964 the Bureau of Public Records of the U. S. Department of Commerce published an interesting study of accidents,[5] and perhaps it is significant for us that of the 35 sections of road studied three were in Iowa. They were 16.1 miles of Iowa Highway #3, from Iowa #241 to Iowa #150; 10.6 miles of U. S. Highway #34 from the Monroe County line to Ottumwa; and 12.2 miles of U. S. Highway #30 near the west corner section 10-82-7W. Nationwide, the study was confined to two- and four-lane main rural highways. Speed and other factors such as the age, sex, military status and residence of each driver, the type of vehicle, horsepower, body style, etc. were taken into consideration. Following are some of the principal findings:

"The accident-involvement, injury and property-damage rates were highest at very low speeds, lowest at about the average speed of all traffic, and increased at the very high speeds, particularly at night. Thus, the greater the variation in speed of any vehicle from the average speed of all traffic, the greater its chance of being involved in an accident.

"The severity of accidents increased as speed increased, especially at speeds exceeding 60 miles per hour.

"The fatality rate was highest at very high speeds and lowest at about the average speed.

"Pairs of passenger-car drivers involved in two-car, rear-end collisions were much more likely to be traveling at speed differences greatly in excess of those observed for pairs of cars in normal traffic. For example, fully one-third of accident-involved pairs of drivers were traveling at speed differences of 30 miles per hour or more, compared to only 1 per cent of pairs of cars in normal traffic.

"Passenger-car drivers under 25 years of age and more than 65 years of age had the highest involvement rates.

"When more than 35 years of age, female

passenger-car drivers consistently had higher accident-involvement rates than male drivers. Fewer consistent differences between the two sexes were noted when drivers were less than 35 years of age.

"Involvement rates for members of the Armed Forces were about twice as great as for non-members in comparable age groups.

"Local drivers tended to have higher involvement rates than other drivers, particularly at night.

"During the day, for passenger cars and trucks, only small differences existed in involvement rates. However at night, passenger-car involvement rates were nearly three times as great as those for trucks having six or more tires.

"Drivers of passenger cars having low horsepower had higher involvement rates than drivers of cars having higher horsepower, regardless of the other variables studied. This may be related to the relatively poor acceleration capability at highway speeds of cars having low horsepower.

"Drivers of older cars had higher involvement rates than drivers of newer cars, but this may have been at least partly related to the low horsepower and poor acceleration of the older cars.

"Difference in makes of passenger cars had little effect on involvement rates.

"The range in involvement rates was considerable, the rate depending on the combinations of driver and vehicle characteristics studied. For example, drivers 40 years of age traveling at 65 miles per hour in cars two years old that had 200 horsepower averaged only one reported accident in 1,600,000 miles of driving. In contrast, drivers 18 years of age traveling at 30 miles per hour in cars six years old that had 100 horsepower averaged one reported accident in 12,000 miles of driving. This example merely demonstrates the extremes in involvement rates obtained in the study. Moreover these and other findings are averages for specific driver groups, and are not applicable to individual drivers, and do not prove that individual identifiable drivers are accident-prone. The findings in the study reported here do show that as a group some specific classes of drivers are more likely to be involved in accidents than are other classes of drivers. Very slow speeds and, to a lesser extent, youth of the drivers had the greatest effect on the involvement rate.

"Computation of injury rates on an occupant-mile basis showed the highest injury rate for occupants of the front left and right seats. The injury rate was about one-half as great for occupants of the center-front, left-rear and right-rear seats; and one-third as great for occupants of the center-rear seats.

"Nearly half of all accident involvements were either rear-end collisions or same-direction sideswipes. However the proportion of these accident involvements decreased as travel speed increased. Single-vehicle, non-collision accident involvements contributed an increasingly greater proportion of all accident involvements as speed increased, particularly at speeds of more than 70 miles per hour. At speeds of 80 miles per hour, non-collision accidents constituted half of all involvements. Although angle collisions usually were less than 15 per cent of the total, at speeds of less than 25 miles per hour they constituted more than one-third of all accident involvements. The proportion of head-on collisions or opposite-direction sideswipes increased as speed increased; but this type of accident involvement always was less than 20 per cent of the total, regardless of speed and day or night conditions.

"Rear-end collisions were the predominant type of collision for every age group; however drivers over the age of 65 also tended to be involved in angle collisions, and younger drivers also tended to have non-collision accidents that involved only their own vehicle.

"Accidents involving many vehicles were rare. For example, only 1 per cent of all accidents involved four or more vehicles, and less than 0.1 per cent involved six or more vehicles.

"Sex and age of drivers affected the proportionate distribution of travel on main rural highways. Female drivers performed only 13 per cent of the day travel, and only 7 per cent of night travel. Male drivers between 20 and 55 years of age performed the greatest amount of travel per registered driver. Older drivers reduced their travel even more at night.

"The mean speed and the variability in speeds showed only a moderate variation for

nearly all driver and vehicle characteristics studied. There was a slight decrease in mean speed as the age of driver and the age of passenger car increased. Average truck speeds were several miles per hour slower than passenger-car speeds. The speeds of passenger cars were directly related to their horsepower, speed being greater for those in the higher-horsepower groups."

The opening sentence of this editorial asked what physicians could do to brighten the discouraging automobile-accident picture. The ensuing paragraphs have contained some pretty specific suggestions, as well as considerable data that each doctor will want to weigh and either discard or use in formulating additional courses of action.

Certainly we as physicians can urge the use of seat belts—either the lap or the shoulder variety. We can counsel our patients to use them, and we can use them ourselves. As physicians we should exert as much pressure as possible to get 0.1 per cent alcohol in the blood established as *prima facie* evidence of intoxication. This level has been approved by the AMA, the National Safety Council, the American Association of Motor Vehicle Administrators and many others. If some of our patients have conditions that we feel make them unsafe drivers, we should discourage them from driving. The AMA Guide to which I have referred[3] will give the physican invaluable help with such cases.

In recent years legislation has been proposed which would require physicians to report to state officials any impairment that might interfere with a patient's driving safely. That would be the same sort of compulsory reporting that is required for cases of venereal disease. The medical profession has always held that this would constitute a serious interference with the confidentiality of the traditional physician-patient relationship, and probably would keep some patients from seeking medical care. However physicians do have frequent opportunities to counsel drivers concerning the relationship between their physical and mental health and the task of operating an automobile. Physicians must alert drivers about the hazards of ingesting certain prescription and over-the-counter drugs such as tranquilizers and antihistamines before driving, and especially about the additive effects of drugs and alcohol.

The medical profession is pretty well agreed that preventing the medically-unfit driver from driving can best be achieved by having laymen screen applicants for licensure and require medical examinations only for those who they suspect have one or more of the problems that the AMA has listed as probably disqualifying.[2] By that means physicians would not have to initiate action against a patient, but rather would determine, on request from the licensing authorities, whether the applicant met prescribed standards. In Iowa, the IMS Medical Advisory Board to the Department of Public Safety has been helpful to the licensing officers in many borderline and questionable cases.

A great deal has been done to make highways, motor vehicles and drivers safer, but even more remains to be accomplished, for we are reliably informed that the numbers of motor vehicles will double once again within the next few years. Physicians must give a share of their attention to this problem, both as civic leaders and as medical men.

—ARTHUR H. DOWNING, M.D.

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THE JOURNAL *Book Shelf*



BOOK REVIEWS

PRACTICAL AUTOMATION FOR THE CLINICAL LABORATORY, by *Wilma L. White,* B.A., *Marilyn M. Erickson,* B.S., and *Sue C. Stevens,* Ph.D. (St. Louis, C. V. Mosby Company, 1968. $14.50).

This timely book is an attempt to gather together essential information on workable automated systems for clinical pathology. Most of the book is devoted to the AutoAnalyzer system, which in some form is in almost universal use in the larger clinical laboratories.

Much of the material has obviously been taken from manufacturers' manuals, and the book contains many pictures of various parts of automated systems. The illustrations have been constructed so as to give the reader a knowledge of the basic principles of the instruments, as well as elementary trouble-shooting technics. A number of new and especially sophisticated instruments are also considered, including an automated electrophoresis unit and a laboratory-oriented data-processing system.

It appears that the authors are most familiar with the applications and modifications of AutoAnalyzer systems, which the photographs show in use at Barnes Hospital, in St. Louis.

This book would be of no particular interest to physicians generally. It is recommended for pathologists who are concerned with automation problems in clinical pathology, and especially for those who are interested in data-processing systems for automated laboratory equipment.—*John W. Green, Jr.,* M.D.

THE COUNTRY DOCTOR AND THE SPECIALIST, by *Fred Lyman Adair,* M.D. (Published by Adair Award Fund, Box 65, Maitland, Florida 32751, 1968).

There was competition for patients among doctors in small towns in Iowa in those days—that's how far back this book goes in its account of the author's father's practice in Anamosa, Iowa. Another bit of medical history, happily now antiquated, is that both the author's brothers died of scarlet fever within a period of two weeks.

The first part of this book is full of such interesting sidelights as a man now approaching his ninety-first birthday can recall of his childhood and youth, his education at the University of Minnesota and at Rush Medical College, and a year in Berlin. Most of this is medical rather than personal, but there is one short paragraph in which he tells of his emotional turmoil over a love affair which the lady finally terminated because she was a Christian Scientist and could not foresee harmony in her marriage to a physician. The reader pauses to consider what a fortunate decision that probably was, for both parties.

The latter half of the book is about his work. The author is a distinguished member of our profession, and we should all be grateful to him for writing this account for us. It has little to say about individual cases, but is devoted to his work in public health, in the field of maternal and child welfare. He succeeded Dr. Joseph B. DeLee at the Chicago Lying-in Hospital, and as the head of the University of Chicago's Department of Obstetrics and Gynecology, was instrumental in the organization of the Joint Committee on Maternal Welfare, of which he was president for many years.

One interesting chapter tells of the production of the film, "The Birth of a Baby," which was brought out through the combined efforts of the Joint Committee and Mead Johnson Company. That was in 1937, and he tells of the furor of publicity and controversy about it, starting with the consternation in the telegraph office when one of the secretaries wired her chief, "Plan to shoot the baby today."

He was concerned with numerous other activities in the interests of public health and the raising of standards in his specialty, among them the organization of the American Board of Obstetrics and Gynecology. In his account he gives credit to many notable associates, and I was nostalgically pleased to find acknowledgements to two of my old instructors, Dr. Henry Schwartz and Dr. Grandison Royston.

To any physician, this book would be interesting and informative, but I think its chief impact upon me was inspirational. What one man can do in a lifetime!—*Faye C. Lewis,* M.D.

INFECTIOUS DISEASES OF CHILDREN, FOURTH EDITION, by *Saul Krugman,* M.D. and *Robert Ward,* M.D. (St. Louis, C. V. Mosby Company, 1968. $16.50).

This is the fourth edition of this deservedly popular book in the last ten years. According to the authors, frequent revisions are essential to keep pace with the rapid new developments in the field of infectious diseases, especially in the development and use of virus vaccines.

The book is one of the best, if not the best, on infectious diseases in children, and the authors are nationally and internationally known experts in this area of pediatrics. The information presented is succinct, accurate and up-to-date.

There are 29 chapter headings and nine color plates. A new chapter on sepsis in the newborn has been added in this edition. The physician who deals with the newborn will find it a most valuable chapter.

Pediatricians will probably find the greatest use for this textbook, but generalists, house staffs of hospitals, medical students and public health departments will also find it a most useful reference source.

This reviewer has no adverse criticisms to make of it. On the contrary, he would recommend it highly.—*Lee Forrest Hill,* M.D.

BOOKS RECEIVED

NUTRITION AND INFECTION, ed. by. *G. E. W. Wolstenholme* and *Maeve O'Connor,* Ciba Foundation Study Group No. 31. (Boston, Little, Brown and Company, 1967, $3.50).

INTERFERON, ed. by *G. E. W. Wolstenholme* and *Maeve O'Connor,* Ciba Foundation Symposium. (Boston, Little, Brown and Company, 1967, $12.00).

DECISION MAKING IN NATIONAL SCIENCE POLICY, ed. by *Anthony DeReuck, Maurice Goldsmith,* and *Julie Knight.* (Boston, Little, Brown and Company, 1968, $12.00).

CARE OF THE GERIATRIC PATIENT, Third Edition, ed. by *E. V. Cowdry,* Ph.D., Sc.D. (Hon.). (St. Louis, C. V. Mosby Company, $15 75).

PEDIATRIC THERAPY 1968-1969, Third Edition, ed. by *Harry C. Shirkey,* B.S. (Pharm.), M.D., F.A.A.P. (St. Louis, C. V. Mosby Company, $25.00).

INTERNAL MEDICINE, ed. by *Peter J. Talso,* A.B., M.D., F.A.C.P., F.A.C.C. and *Alexander P. Remenchik,* B.S., M.D., F.A.C.P. (St. Louis, C. V. Mosby Company, 1968, $17.50).

STRABISMUS IN CHILDHOOD, Fourth Edition, by *Herbert M. Katzin,* M.D. and *Geraldine Wilson,* R.N. (St. Louis, C. V. Mosby Company, 1968, $3.95).

Ambulances, Not Helicopters, Right for Iowa

Land-based ambulances, rather than helicopters, are the solution to Iowa's emergency medical problems, according to a report called "Hospital-Based Ambulance Service" published late in June by the U. of I. Bureau of Police Science.

Mr. Richard L. Holcomb and Mr. Lyle L. Shook, director and assistant director of the U. of I. Bureau, edited the report, and it includes contributions by hospital administrators, a lawyer and a doctor, as well as their own articles. It was published in conjunction with Shook's earlier "Study of Iowa Ambulance Service," which surveyed the state's problems with existing public and private ambulances, and recommended the hospital-based service as the best solution.

The report rejects helicopters as primary emergency vehicles, partly because of the salaries of the three necessary pilots, the total of which would probably approach $50,000 a year, Mr. Shook said. "An impressive fleet of mobile emergency rooms [Mr. Shook's term for ambulances] can be put into use for the price of just one good helicopter operation." The pilots' boredom would be another factor, Shook said, for the calls could not be expected to fill up their eight-hour shifts.

The helicopter would be grounded frequently by blizzards, high winds, snow, fog and heavy rain, he predicted. Also an aircraft pilot would have trouble navigating at night in rural areas. Another set of problems would come from landing the helicopter at the hospital. Mr. Shook said the noise would be a nuisance, and the hospital roof would have to be reinforced unless some other "landing pad" could be built.

The helicopter is effective for emergency work in Vietnam, he said, because the government is willing to spend the necessary money, because the aircraft are usually in the air near where combat is expected, because the patients are young and because field hospitals are nearby.

Other contributors to the new report are administrators of three Iowa hospitals which run their own ambulance services. Charles R. Linden, of Boone County Hospital, has written on "Requirements for Ambulance Facilities"; James Anderson, of Lutheran Hospital, Fort Dodge, "Hospital Ambulance Service Accounting"; and Robert C. Garrison, of Palo Alto County Hospital, Emmetsburg, "How One Small Hospital Recently Implemented the Ambulance-Orderly Concept."

Also included are an article by Mr. Peter Farrell, an attorney and research associate at the U. of I. Institute of Public Affairs, on "Legal Aspects," and one by Dr. Willard A. Krehl, a research professor of internal medicine and coordinator of the Iowa Regional Medical Program at the U. of I., on "The Development of an Emergency Medical Care System."

The report contains the ambulance service manual used by Lutheran Hospital, Fort Dodge, as well as lists of training films and books, ambulance and orderly statistics from Boone County Hospital, and the outline of a suggested course for prospective "immediate-care technicians."

Iowa Methodist Hospital Internal Medicine Symposium

The Fifteenth Annual Internal Medicine Symposium sponored by the Section of Internal Medicine at Iowa Methodist Hospital will be held on Saturday, September 28, in the Ralph L. Jester Auditorium at the Iowa Methodist School of Nursing, 1101 Pleasant Street, Des Moines. No registration fee will be charged, and physicians from throughout the state are cordially invited to attend.

The general topic will be "Neurology and the Internist," and the speakers and their topics are as follows:

R. G. Bickford, M.D., of the Mayo Clinic: "The Microreflex System and Its Application in Diagnosis"

David Green, M.D., associate professor of neurology at Albany Medical College: "Obscure Neurologic Diagnoses"

A. L. Sahs, M.D., head of neurology, U. of I. College of Medicine: "Viral Infections of the Nervous System"

Joseph M. Waltz, M.D., of the Department of Neurologic Surgery, St. Barnabas Hospital, New York City: "Cryptotherapy and the Treatment of Parkinson's Disease"

For further information, write either Lawrence F. Staples, M.D., or James E. Kelsey, M.D., Iowa Methodist Hospital, Des Moines 50308.

THE DOCTOR'S BUSINESS



Insurance Forms— Friend or Enemy?

LARRY E. LEAVERTON
Des Moines

Regardless of the doctor's individual philosophy, or whether he is for or against third-party payment of his patients' fees, handling and processing the multitude of insurance, Medicare and Medicaid forms is a problem in his office. The forms are received with varying degrees of welcome and are frequently a cause for grumbling on the part of the doctor and his office staff. Some offices take it in stride, but others never recover from it.

From a public-relations standpoint it is important that the forms be accepted and processed as speedily, accurately, efficiently, and cheerfully as possible.

It is becoming necessary to develop an insurance specialist within the office—one who knows all of the fine points about insurance, Medicare and Medicaid, one who can complete the forms with ease, and one who can patiently answer the many questions posed by confused patients.

Patients frequently blame a physician because a health-insurance policy does not cover the entire fee, or the physician may blame the insurance company for not paying a larger amount on a claim. The facts may be that the patient or the patient's employer bought a low-cost policy that entitles the employee and his dependents to no more than low-pay benefits. But however that may be, it must be explained that the physician's fee for services does not necessarily coincide with the amount allowed by the insurance company, and that the patient will be billed for the difference. The contract is between the patient and the insurance company, not between the doctor and the insurance company.

It is important for every physician's office to have a system for completing forms and keeping them current.

The first requirement is a thorough knowledge of the various types of health insurance plans, both private and governmental. Files and reference material should be kept, with the latest instructions, fee schedules and benefit allowances, and there should be a supply of all current forms for ready reference.

While the patient is in the office for the first time, it should be determined whether an insurance claim will be filed, and what forms will be necessary. Get all of the essential information, and mark the details on the patient's record.

The patient's history should be kept in such a manner that the required information can be easily transferred to the insurance form. The bottleneck in many offices is the incompleteness of the information in the histories.

Offices with a heavy flow of insurance forms will find it helpful to keep a separate insurance log or register containing each patient's name, the date the forms were received, the name of the insurance company, the date the forms were completed and the date the payment was received. It will serve as a ready reference whenever questions arise regarding the status of any claims pending or regarding any follow-up needed. Another acceptable procedure is to record that information on the patient's ledger card.

The Health Insurance Council (HIC) and The American Medical Association's Council on Medical Service have recognized the diversity of insurance forms and have spent a number of years developing standard forms. The advantages are obvious. Companies using the HIC symbol have standard questions and a standard numbering system. You can stock your own forms, and copies can be easily prepared for patients having more than one policy. Assignment of payment and authorization to release information are incorporated in the form. It is easier to train medical assistants to complete a standard form than to try to cope with a multitude of differing ones.

Should an extra charge be made for completing insurance forms? I think not—unless there is a definite abuse. By "abuse," I mean a patient's requesting reports to a number of different insurance companies, each of which requires the use of a distinctive report form. Even in that case, du-

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

plicate forms can be made by copy machines for the minor cost of 5 or 10 cents each. If the doctor's fees are adequate, the amount charged for the medical procedure should cover the office overhead that is involved. A survey made by our organization disclosed that the majority of offices *do not* make additional charges for insurance forms.

With an efficient system and a well-informed insurance specialist, the job of completing insurance and governmental forms can be taken in stride. Patients will appreciate receiving prompt service, answers to their questions, and a full and accurate explanation of their coverages. Every practice includes patients who would have difficulty paying without insurance and/or governmental assistance.

Should You Deed Your Body to Medical Science?

In recent months hundreds of thoughtful and deeply concerned Iowans have enthusiastically responded to appeals by The University of Iowa College of Medicine for an increased support of the deeded body program. Through the generous gifts which these public-spirited people will someday make to the advancement of medical science and the welfare of humanity, it will be possible to maintain the full-scale teaching and research programs which have been severely threatened by a persistent shortage of anatomical subjects; it will be possible to develop new and better methods of alleviating human illness and suffering; it will be possible to ensure a healthier and happier life for our children and grandchildren.

The critical shortage of anatomical subjects at The University of Iowa College of Medicine has been mentioned so often of late, in both the religious and the secular press, that many conscientious people have become seriously alarmed. There is a growing awareness that without the active support of the more responsible segment of the population a marked deterioration in the quality of medical training and professional skill could very easily occur. Here, as is true in any emergency which seriously threatens health and welfare, the people of Iowa have risen to the occasion, and have made such personal sacrifices and contributions as the gravity of the situation necessitated. But more help will be required than has become available.

The decision to make this vitally important contribution to medical progress and human welfare is based upon the assurance that it has both religious and social sanction. It is, in fact, actively encouraged by many religious leaders, and it has found its strongest support in the more socially and financially responsible segment of the population.

For the traditionalist, the decision to participate in the deeded-body program may be influenced by the fact that this bequest need not appreciably alter usual funeral and burial customs. The only major change required in the normal routine would be a moderate extension of the time lapse between the funeral service and the final disposition by earth-burial or cremation.

For those who object to any or all of the traditional funeral practices, the bequest may provide a logical and welcome means of escaping what heretofore may have been regarded as an unavoidable obligation and expense.

Regardless of the form of memorial service and final disposition, making a bequest to medical science will help to perpetuate the memory of the donor in a manner that will bring honor, pride, comfort and satisfaction to his survivors.

Comfort for those who survive will also be derived from the knowledge that at The University of Iowa College of Medicine the dignity of the dead is maintained. All bodies entrusted to the care of the medical school are under the constant supervision of licensed professional morticians. In clean, bright, attractive surroundings, they receive the same high degree of respect and privacy they would be accorded in the finest funeral home. At The University of Iowa College of Medicine there are no tanks and no cadavers—there are only dead human bodies resting in an atmosphere of dignity and quiet as in a mausoleum.

More detailed information regarding the deeded-body program can be obtained by writing to the Department of Anatomy, College of Medicine, The University of Iowa, Iowa City, Iowa 52240.

Health-Careers Recruiting Materials Are Still Available in Iowa

The recent disbanding of the Health Careers Council of Iowa should not be taken to mean that pamphlets on health careers are no longer available in the state. The Woman's Auxiliary to the Iowa Medical Society is continuing to distribute them—indeed it sent them to 500 high-school counselors during the past academic year; Mrs. M. E. Olsen, of Minden, is a member of the Health Careers Committee of the AMA Auxiliary; and Mrs. Carroll O. Adams, of Mason City, and her State Auxiliary Health Careers Committee continue active in sponsoring health careers clubs and in providing liaison between the medical profession and high school teachers throughout the state.

Physicians, teachers and others who can make use of health-careers recruiting literature are urged to write or call Mrs. Adams, or Mrs. Hazel Lammey, at the IMS, in West Des Moines.

University Hospitals DRUG LETTER

Expectorants

H. B. RICHERSON, M.D.

Certain drugs seem to help patients raise sputum. These agents have been evaluated by measuring the effect on sputum volume and/or viscosity,[1, 2] but despite valiant attempts, no one has convincingly proven their clinical effectiveness. A recent paper on the effectiveness of iodides in certain patients with asthma provoked an interesting discussion,[3] but it seems that most practicing physicians find expectorants empirically useful in the treatment of chronic obstructive airway disease, although there is no solid scientific evidence of their benefit.

Tradition is strong. Sir William Osler, considered a therapeutic nihilist by his contemporaries, wrote on the treatment of asthma: "In preventing the recurrence of attacks, there is no remedy so useful as iodide of potassium, which sometimes acts as a specific."[4] One is inclined to pay considerable attention to that statement until he is horrified by Osler's treatment recommendations for chronic bronchitis: "When there is much sense of tightness and fullness of the chest, the portable Turkish bath may be tried. . . . Turpentine, the old-fashioned remedy so warmly recommended by the Dublin physicians, has in many quarters fallen undeservedly into disuse. Inhalations of eucalyptus and of the spray of ipecacuanha wine are often very useful. If fetor be present, carbolic acid in the form of spray will lessen the odor, or thymol, but the intratracheal medication is the most efficient. After the larynx is anesthetized with a 4 per cent cocaine solution, inject with suitable syringe about two drachms (8 cc.) of olive oil, with ½ iodoform, and gr. ⅛ morphia if there is irritating cough. For urgent dyspnea with cyanosis, bleeding from the arm gives most relief." This formidable regimen is preceded by the qualification: "Cure is seldom effected by medicinal remedies." Small wonder! But the qualifying statement may partly redeem Osler for us.

In our modern scientific age we smile indulgently at these artful therapeutics, certain that controlled studies will have settled the matter. Then, however, we perhaps are a little shaken when we find, in our UNIVERSITY HOSPITAL FORMULARY a "lung shrinker" containing potassium iodide, hyoscyamus, grindelia, lobelia and alcohol; this seems to be a veritable witches' brew. And then we find that there are no definitive clinical studies on expectorant drugs. Whether this failure is due to deficiency of the drugs or to methods of drug evaluation is uncertain. At any rate, we seem to have little more scientific basis for recommending the use of expectorants than did Osler.

Patients with many lung diseases need help in raising sputum. Certain measures seem empirically useful for this purpose. Until definitive drug evaluation is done, it seems reasonable to use them in appropriate patients in the spirit of therapeutic trial. The individual patient's response may dictate future usefulness. If no improvement is noted, the drug should be stopped. If the drug helps, it can be used empirically, intermittently, and with or without skepticism.

The agents which presently seem to be most useful are discussed individually.

ORAL MEDICATIONS

1. *Potassium iodide* has been around a long time and continues to lead the list. It is classified as a saline expectorant; the mechanism involved in rendering sputum easier to raise is unclear. Iodides do increase sputum volume, and irregularly decrease its viscosity.[1, 2] Iodides have also been shown to induce proteolysis in purulent sputum.[5] Available in saturated solution, syrup or tablet form, the dose may be titrated to fit the patient. The initial dose should be small because of occasional idiosyncratic reactions, particularly on the salivary glands. SSKI (one grain per drop) dose may be gradually raised from three to 15 drops t.i.d. until benefit, failure or side effects result. Acne may occur at higher doses, and can be controlled by simply lowering the dose. A rare complication is severe dermatitis (bullous, exfoliative). Myxedema may uncommonly result following chronic use. Iodides should not be used during pregnancy, since goiter may rarely occur in the fetus. As with many other drugs, it may be well to use iodides intermittently (e.g., two or three weeks out of each month) rather than continuously, if long-term administration seems called for.

2. *Glyceryl guaiacolate* has been used in patients unable to tolerate iodides. It has been shown to increase sputum volume in experimental animals. It is classed with creosote, and seems to act as a reflex expectorant.[1] Clinical effectiveness has been poorly studied, and its popularity is probably due

The two articles published under this heading this month appeared initially in the March, 1967, issue of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. They are reprinted at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors. Dr. Richerson is an assistant professor of internal medicine, currently on a year's leave of absence in Boston, and Dr. Mitchell is an associate professor of pharmacology.

more to drug-house packaging and availability than to scientific evaluation or empirical satisfaction. Inconveniently large quantities are required if this agent is prescribed as the syrup for chronic use.

3. *Ammonium chloride,* classified as a saline expectorant, has been shown to augment respiratory-tract fluid volume in rabbits and cats. Clinical studies, however, have generally failed to demonstrate an expectorant effect in human respiratory disease. If a trial is warranted, the usual dose is 0.5 to 1.0 Gm., q.i.d.

4. *Terpin hydrate, chloroform* and *tolu balsam* have been used in the past, and continue to be included, along with various syrups, in proprietary cough compounds. They are probably harmless, as well as useless, in the dosages used.

AEROSOLS, INHALATION THERAPY AND INTRATRACHEAL INSTILLATIONS

1. *Acetylcysteine (Mucomyst)* was introduced as a mycolytic agent in 1963. Evaluation has been largely uncontrolled; some investigators have been quite enthusiastic.[6] In general, it seems to be useful in the treatment of cystic fibrosis,[7] but probably less so in chronic bronchitis. Its role in the treatment of asthma is uncertain, since asthmatic mucus plugs are not affected by Mucomyst, and the agent itself sometimes induces bronchospasm. It is employed by aerosol nebulization or direct instillation. Reportedly its mode of action is the splitting of disulfide bonds. It is supplied as a 20 per cent solution, and is usually diluted half with saline prior to use. It reacts irreversibly with most metals and rubber, and so must be used with proper equipment.

2. *Pancreatic dornase (Dornavac)* acts by liquefying DNA of pus, and thus is effective against purulent sputum. It can be irritating, and hypersensitivity reactions have occurred. Aerosol treatment of pulmonary infections with antibiotics added to Dornavac achieved some success in an uncontrolled study.[8] This agent seems rarely to be indicated.

3. Other enzymatic agents which have been used by inhalation include *streptokinase-streptodornase (Varidase)* and *trypsin.* Hypersensitivity reactions and difficulty in evaluation of effectiveness have been deterrents to their wide use.

4. Surface-active agents *(Alevaire, Tergemist, Tween 80)* are widely used, but seem no better than water or saline in liquefying sputum by dilution.

IF AEROSOL TREATMENT IS TO BE USED, A NEBULIZER CAN BE ATTACHED TO AN OXYGEN OR COMPRESSED-AIR OUTLET. NEBULIZATION CAN BE CONTROLLED BY THE PATIENT'S THUMB. AN EXPENSIVE, ELABORATE, POSITIVE-PRESSURE RESPIRATOR IS UNNECESSARY IN MOST PATIENTS REQUIRING AEROSOL THERAPY. IN FACT, THE RESPIRATOR, USED SIMPLY AS A NEBULIZER, IS CURRENTLY BEING MARVELOUSLY OVERWORKED!

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Acetylsalicylic Acid and Its Combination With Other Agents

C. L. MITCHELL, Ph.D.

Clinical impressions sometimes develop in therapeutics and are held for years without being submitted to critical testing. In this manner it has become accepted by many that the pharmacologic properties of aspirin may be enhanced by combining it with a variety of other agents. Although preparations containing other analgesics in addition to aspirin have been the most common, combinations with agents such as sedative-hypnotic drugs, the so-called tranquilizers and even amphetamines have appeared with increasing frequency during the past few years.

Combination with phenacetin and caffeine. The widely held assumption that the combination of aspirin, phenacetin and caffeine has greater analgesic effectiveness than an equivalent dose of aspirin alone has never been supported in controlled clinical trials. On the contrary, the available evidence clearly indicates that an equivalent dose of aspirin will relieve pain as effectively as the aspirin-phenacetin-caffeine combination. Moreover, in view of the possibility of blood and renal damage from the prolonged use of large doses of phenacetin, aspirin is probably safer for long-term use.

Combination with codeine or propoxyphene (Darvon). There is one controlled clinical study suggesting that the combination of codeine and aspirin *may* have some merit. In this study it was reported that, in patients with terminal carcinoma,

32 mg. of oral codeine and 600 mg. of aspirin were equal in their analgesic effect. Together, these agents had an additive effect. *However,* there have been no adequately controlled relative-potency assays of aspirin and oral codeine based on *graded* doses of each drug. Thus it is not known whether an effect equivalent to the combination could have been obtained simply by increasing the dose of either agent alone.

With respect to propoxyphene (Darvon), its usefulness as an analgesic is so controversial that one must question whether its combination with aspirin is more effective than 600 mg. of aspirin alone.

Combination with sedative-hypnotics or tranquilizers. There is no sound clinical evidence that either sedative-hypnotic agents or tranquilizers in the amounts present in the available prepared combinations have analgesic effects *per se,* or that they enhance the effects of aspirin. It is true that central nervous system depressants (sedative-hypnotics and "minor" tranquilizers in particular) are effective in relieving muscle spasms and thereby reduce or abolish pain associated with musculoskeletal disorders. However there is no good evidence that the combination of the above-mentioned agents with aspirin increases their efficacy.

Combination with amphetamines. Numerous studies have purported to show an analgesic action of amphetamines in experimentally induced pain in animals and human subjects. However clinical evidence for an analgesic effect of amphetamine alone or in combination with aspirin is lacking.

GENERAL COMMENT ON DRUG COMBINATIONS

Manufacturers supply drug combinations in fixed ratios, yet there is usually no sound basis for the ratio chosen. Moreover, patients vary widely in their responses to drugs. Thus it would seem more rational to choose a suitable dose of each agent for a particular patient. Furthermore drugs vary in their durations of action. Some agents (e.g. aspirin) are usually prescribed for ingestion every three or four hours. This is a shorter interval than is needed for other drugs (e.g. amphetamines and some sedative-hypnotic agents). For these reasons, if it is desirable to prescribe more than one drug, it is usually better to prescribe them separately rather than to use a manufacturer's combination.

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JAMES F. SPEERS, M.D., M.P.H., COMMISSIONER

Out of Sight, Out of Mind? Never!

Poliomyelitis has been reduced to insignificant numbers of cases in Iowa. Only six cases are known to have occurred in the state since January, 1963—four cases in 1965 and one each in 1964 and 1967.

There is no room for complacency, however. When a disease is absent from a population, the physician's index of suspicion tends to drop. This is well illustrated by the failure of prompt diagnosis of smallpox introduced into areas from which it has been absent for some years. Smallpox cases introduced into Europe nowadays are often not diagnosed until three generations of cases have occurred. The same thing has happened in areas of the United States in the past year or two in regard to poliomyelitis. Minimal localized outbreaks of this latter disease have been allowed to develop before the situation was reported to officials responsible for the institution of organized control programs.

Suspected and diagnosed cases of poliomyelitis must be reported promptly to assure the application of measures wide enough to prevent spread to others. Instant epidemiologic investigation of the circumstances of infection and institution of effective epidemic control procedures depend upon quick reporting by alert physicians.

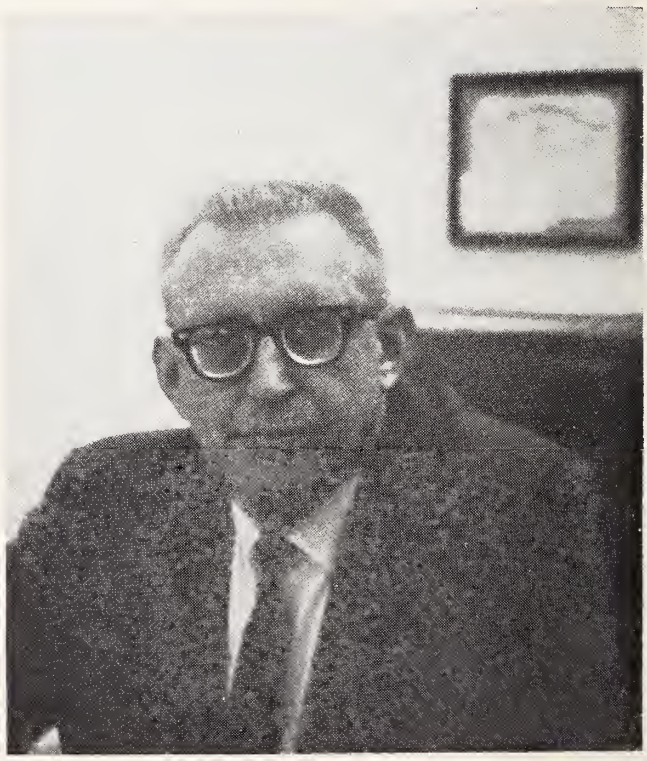
Physicians who see patients with symptoms suggestive of neuromuscular or central nervous system involvement of unknown etiology should seek laboratory study of appropriate specimens. The State Hygienic Laboratory has excellent services for bacteriologic and virologic investigations at no charge to physicians or patients. With such an opportunity, there should be no hesitancy in thorough investigation of etiology.

As the human reservoir of poliomyelitis has been reduced, the opportunity of natural immunization has been correspondingly reduced. The occurrence of sporadic cases indicates that wild virus remains in the environment of the state. However, under these two circumstances, an immunologically virgin generation has developed, the members of which may contract poliomyelitis unless they are actively immunized with vaccine virus. Every physician who sees infants and young children should make certain that every child is completely immunized against poliomyelitis. Only by immunizing the coming generations can we keep this disease from resurgence.

New Health Commissioner

James F. Speers, M.D., M.P.H., succeeded Arthur P. Long, M.D., Dr.P.H., as State Health Commissioner on July 1. Dr. Speers served as director of the Des Moines-Polk County Health Department until 1965, when he moved to the State Health Department as chief of the Division of Community Health Services.

A native of New York City, Dr. Speers received his medical degree from Columbia University in 1948, and a master's degree in public health administration from the University of North Carolina in 1954. He engaged in general practice for three years at Titusville, Florida, and served as public health officer for Brevard and Osceola Counties, in Florida, during the time when the space-ex-



Dr. James F. Speers

ploration facilities at Cape Kennedy were being developed.

Besides being a member of county, state and national divisions of organized medicine, he is a fellow of the American Public Health Association and a member of the Iowa Public Health Association.

He was a leader in getting the General Assembly of Iowa, in 1967, to enact legislation authorizing county boards of health.

Family Living and Sex Education

MADELENE M. DONNELLY, M.D., M.P.H.
Chief, General Health Service

For the past few years many public health workers and others have been intersted in providing better education for our youth in the area of family living and sex education. Increasing the knowledge of any given individual about family living and sex primarily helps that individual understand his own body development and functions and, hopefully creates in him a sense of responsibility for his own family life.

Family life and sex education is rapidly becoming more acceptable, and with the development and release of a Joint Policy Statement by the Departments of Public Instruction and Public Health and the Iowa Medical Society, many authorities now feel secure in planning this type of instruction.

To recap this general policy statement briefly, let us look at the various parts of the document. Its introduction states that sex education should be a definite part of the school curricula in all of the elementary and secondary schools, giving scientifically accurate information and handled in a professional manner. The primary purpose is to help the students become responsible members of society. The statement then emphasizes the fact that parents have the basic responsibility for teaching sex to their children, but that their teaching must be augmented and supplemented by the schools and other community agencies. Third, the subject needs to be interwoven into appropriate courses, and taught by the classroom teachers, not by outsiders who come in for a one-shot lecture or demonstration each. Finally, the statement points out that teachers need appropriate training if this program is to be properly implemented.

This policy in no way limits the teaching of sex or family living to school classrooms, and we must remember that it emphasizes the involvement of other agencies in this activity. It is unlikely that we would be as far along as we are today if it were not for the positive stands taken by some of our churchmen in teaching family living concepts within the church. When the church places an emphasis on the spiritual and moral values of sex as a part of family life, it will be reflected by the attitudes and actions of the students.

A question frequently asked is: "Who is going to teach 'sex,' and who is prepared to teach 'sex'?" Obviously, if we are going to integrate this type of education into the curriculum, it will have to be handled by teachers. There are teachers—though fortunately few in number—who cannot and probably will not discuss the biologic processes easily. They probably should not attempt to teach the family-life subject matter. There are now short courses available at many colleges and universities that provide teachers some concentrated training in family-life and sex education. Teachers should be encouraged to attend these workshops. Within our own state we have a group representing a variety of professions who have skills and knowledge in this area, and seminars can be organized. Such seminars can provide information on both content and development.

Schools undertaking family life and sex education need professional leadership and help such as can be given by doctors and nurses. We cannot expect a physician actually to participate in teaching individual classes, but he can be used in sessions to plan curricula, and certainly he can be used as a resource person to check the scientific accuracy of the subject matter that is to be taught. In some areas there has been a tendency to ask the school nurse to teach such classes. We cannot afford to take her time for classroom teaching. We must use her as a school nurse. However, she should be on the committees developing the curriculum.

The Joint Policy Statement insists that family life and sex education be integrated, that is, woven into many subjects in the curriculum. This kind of material can easily be brought into discussions in the lower elementary grades. These children often experience the advent of another child in their own family groups. The children will come to school excited about the advent of a baby and are anxious to tell their peers and teachers about this event. This discussion is normal and can be used by the teachers as an occasion for explaining the reproductive process in a simple fashion. Many people question the idea of teaching a kindergartner about the birth of a baby, but why, isn't it more scientific and more proper to tell a child of this age the truth rather than put him off with old stories like the one that babies are found under a cabbage leaf? Children of today do not accept these ideas readily.

It is now acceptable to talk to girls at fifth and sixth grade levels about menstruation and to show them the movie "Molly Grows Up." From time to time we may need to re-evaluate this timing. There has been a definite change within the past one or two decades, and in this geographical area we now find that girls have their menarche earlier. We may not be giving them this information before the onset of their menstrual periods. It has always been the custom to separate boys and girls when we talk about menstruation. It may be a good thing, for at such a discussion we want the girls to feel free to ask questions. Many girls have

very personal questions to ask—questions that their mothers may not have answered regarding bathing, activities, pads, belts, Tampax—and all of this really needs to be done in the privacy of the female sex. However, boys need to learn about menstruation just as girls do, and we should arrange to show the movie and talk to them about menstruation at the same time, even though we do separate them.

Education for family living and sex education should continue into the high school years. But again, schools need to evaluate content, the number of students receiving this kind of education and the scientific validity of the information presented. Courses should help the teenager understand good relationships with his family and associates, and the development of a good attitude toward sex. Too often we stress abnormal problems such as homosexuality, excessive masturbation and venereal infections, to the point of giving these children distorted notions regarding a healthy, normal sexual life. It is disturbing when students write in and want information which will help them write a term paper or give a talk to their high school English class on abortion, abortion laws, out-of-wedlock births, homosexuality, and other quasi-scientific subjects. Indeed these are subjects which need to be understood, but we believe there is a great deal of difference between understanding them and overemphasizing them.

To summarize, all of us, regardless of where we work, have a great need to increase our knowledge about sex education and to increase our ability to impart this knowledge to other people. We should seek to have a more standardized format for the instruction to be given at various age levels. We should have a good bibliography which would put good scientific information at our fingertips, and we must all help to develop a vocabulary which we can use in teaching both children and parents, so that they are a little more at ease and comfortable in discussing the problems.

The State Health Department staff feels that Iowa is really getting a good start at teaching family living and sex. The Department will welcome the opportunity to cooperate with any groups working in this field, and will share with them any of the educational materials and developments that it has.

Solid Waste and the Disposal Problem*

When plastic bottles, cups and other plastic products appeared on the market, people were delighted. They were lightweight, inexpensive, easy to handle and unbreakable. And they could be thrown away. This has been one of our large modern-day problems: how to dispose of them. Most of them don't burn, and they don't break.

Many other items are included in this solid-waste group, such as garbage, metal cans and glass bottles, construction and demolition debris, yard rubbish, abandoned automobiles, wornout tires, old stoves and refrigerators, baby carriages, lawn mowers, broken toys and an almost infinite variety of other refuse.

Will our state eventually become a huge dumping spot for solid waste materials? With Iowa now generating an estimated eight million pounds each day, or four pounds per person, urban and rural officials are concerned. The concern grows greater when we recognize that by 1980 the rate of solid-waste disposal will rise to six pounds per person per day.

The State Department of Health was designated by the governor as the agency for carrying out the state's responsibilities under the provisions of the federal solid-waste disposal act passed by Congress in 1965.

There are over 950 incorporated Iowa cities and towns, of which many are too small to provide more than an open dump with the usual health hazards associated with rats, insects, odor and smoke. The Health Department has surveyed over 350 municipal solid-waste disposal facilities, and has made recommendations for converting them to sanitary land-fill operations.

The three sanitary methods of solid-waste disposal commonly used in this country are incineration, composting and sanitary land-fill. The last of those appears the most practical for Iowa. It is a method whereby the solid waste is deposited in a man-made trench or natural excavation. It then is compacted by a heavy machine such as a track-type, rubber-tired or steel-wheeled tractor, and then is covered by a six-inch layer of compacted dirt at the end of each day. This process is repeated daily, and no burning is allowed at the site.

Most of Iowa's largest cities are converting to the sanitary landfill, but only a few satisfactory operations presently exist. Sioux City and Cedar Rapids are operating sanitary landfills using the trench method.

Some communities are allowing some burning of combustible material in an area near the landfill proper. Others have purchased or constructed cone-shaped metal burners. However problems of air pollution and proper disposal of the partially-burned residue still exist. The Iowa Air Pollution Control Commission is considering regulations to control open burning as it relates to solid wastes in Iowa.

Des Moines recently received a $73,000 federal grant to support an areawide investigation of the solid-waste problem in its metropolitan area, which includes 11 communities and parts of two counties. That grant and $22,000 contributed by other governmental units were used to retain the services of a firm of consulting engineers to conduct a study and frame a solid-waste management plan for the area. The report has now been completed.

A rapidly growing population, increasingly concentrated in urban areas, has made pollution a

* By Mr. Jack Clemens, of the Environmental Engineering Service, State Department of Health.

critical problem. Insanitary solid-waste disposal practices threaten human health in ways other than through air and water pollution. Vast numbers of rodents and insects that carry human diseases find food in dumps. This health hazard is worsened in some communities by the open dumping of wastes from cattle, swine and chickens.

State Health Department regulations require that all disposal of refuse (solid wastes) shall be accomplished by a method or methods that provide maximum practical rodent, insect and nuisance control. An open dump does not meet that requirement, but a sanitary landfill does. It is hoped that communities will join together, wherever possible, in the operation of sanitary landfills for the proper disposal of solid wastes. Among other things, this can be an answer to the disposal problem created by those "throw-away" plastic containers.

Achievements in Cardiovascular Surgery

A publication entitled "Cardiovascular Surgery" (PHS Publication No. 1701), which describes the most recent advances in the surgical treatment of congenital and acquired heart disease, was issued on July 11 by the National Heart Institute of the National Institutes of Health.

Spectacular strides have been made during recent years in the field of cardiovascular surgery.

- Today corrective or palliative operations have been devised for most of the common inborn heart defects and for many of the rarer forms as well.
- With the development of better artificial heart valves and improved methods of sustaining the patient during prolonged open-heart operations, surgeons can repair or replace as many as three heart valves damaged by rheumatic fever during a single operation with good prospects of success.
- High blood pressure caused by atherosclerosis or blood clots interfering with the kidney's blood supply can often be cured by surgery to restore normal renal bloodflow.
- A variety of ingenious, totally-implantable artificial pacemakers have been developed to restore and maintain normal heartbeat in victims of heart block.
- Assisted-circulation techniques, or "booster hearts," are being developed for maintaining normal blood pressure and adequate bloodflow to the body's organs and tissues while substantially reducing the workload of severely damaged or failing hearts. This temporary respite may enable damaged hearts to recover completely.
- And much research is presently being directed toward the development of a completely implantable artificial heart to replace hopelessly damaged or diseased hearts.

These and other facts including available facilities and services, such as financial assistance for the prospective surgical patient, are presented in the fully-illustrated "Cardiovascular Surgery."

Single copies may be obtained, free of charge, from the Heart Information Center, National Heart Institute, National Institutes of Health, Bethesda, Maryland 20014. Quantity copies may be purchased at 45¢ per copy, $33.50 per 100, from Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Morbidity Report for Month of June, 1968

Diseases	June 1968	May 1968	June 1967	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	332	717	451	For the state
Typhoid fever	1	0	0	Des Moines
Smallpox	0	0	0	
Measles	12	206	101	Dubuque, Johnson, Shelby
Whooping Cough	1	33	13	Scott
Brucellosis	1	2	8	Marion
Chickenpox	317	555	338	For the state
Meningococcal meningitis	1	2	2	Scott
Mumps	700	770	493	For the state
Poliomyelitis	0	0	0	
Infectious hepatitis	27	28	10	Jackson, Tama, Woodbury
Rabies in Animals	12	10	14	For the state
Malaria	2	0	0	Davis, Polk
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	12	10	24	For the state
Syphilis	71	81	85	For the state
Gonorrhea	383	236	244	For the state
Histoplasmosis	4	1	4	Johnson, Linn, Muscatine, Story
Food poisoning	52	0	0	Cerro Gordo
Meningitis (type unspec.)	0	0	2	
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	9	6	12	For the state
Tetanus	0	0	0	
Chancroid	1	0	1	Polk
Encephalitis (type unspec.)	0	1	0	
H. influenzal meningitis	0	0	1	
Amebiasis	0	1	0	
Shigellosis	7	2	7	For the state
Influenza	0	0	0	

Woman's Auxiliary News

Fringe Benefits of National Convention June 16-20, 1968

Everybody in San Francisco has one long leg and one short leg. There is no other way to cope with those hills. Nobody walks upright there, either. It is lean forward to go uphill or lean backwards going down. Then there are the cable cars, those prehistoric clackety contraptions that rush headlong down one incline and up the next, bell clanging, with passengers sprouting from the sides like decorations on a Christmas tree.

And the eating places! There was Trader Vic's, tucked back in an alley, and there my Trader Vic's scarf (presented to me at the Illinois state meeting) got us a preferred table. There were Omar's (who can spell Khayiam?) for Armenian food, Chinatown, and Fishermans' Wharf. Then, in deference to my husband's outraged protests at so much exotic food, there was a steak at Dominicks's.

Such delightful company, too. Dr. Seibert's room at the Fairmount was Iowa Headquarters and the scene of pleasant gatherings. There was a Medical College reunion in the Mark Hopkins, where a surprising number of Hawkeye medicos gathered. Auxiliary girls (?) from all around the country were there, and it was so nice to see so many of them again. The topping on the dessert came in a couple of evenings with old Army friends, Len and Margie Warres, the latter president of the Maryland Auxiliary.

There were many other delightful things, places, and people, and I am grateful to you once more for choosing me to represent you. Meeting so many devoted Auxiliary workers, as I did in San Francisco, points up again the worth of what we are doing. Thank you for sending me.

AMA-ERF Fund Raising Projects

Note Paper
Playing Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036
or
Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

P.S. A great deal of hard work went on, too, and it will be duly reported on these pages by the delegates and alternates. Congratulations and best wishes for a successful year are certainly in order for Mrs. Howard Ellis, as North Central Regional Vice President, and Mrs. Max Olsen as Health Careers Chairman of North Central Region for 1968-1969.

—Lenor Bishop

Round-Up Report of the 45th National Convention

Conducted tours through a unique rehabilitation mobile unit, closed circuit TV programs and an afternoon of continuous health education films were outstanding features of the 45th annual convention of the Woman's Auxiliary to the American Medical Association. The meeting, held at San Francisco's St. Francis Hotel, June 16-19, attracted a registration of 1,741.

Auxiliary president Mrs. Karl F. Ritter, Lima, Ohio, presided over the sessions. The amendments to the bylaws, adopted unanimously, included:

- An increase in national dues from $2.00 to $4.00, which will include a subscription to MD's WIFE.
- Change to allow the nominating committee to meet somewhere other than in Chicago.
- Revisions in bookkeeping and vouchering procedures at such time as may be practical.

Highlighting the four-day session was the mobile demonstration unit called "Homemaking Unlimited." This five-ton coach, sponsored by the University of Nebraska School of Home Economics, shows handicapped housewives how they can be self-reliant homemakers despite physical limitations. The unit contains specially designed homemaking features, such as kitchens, baths, and storage areas.

AMA closed circuit TV shows with Auxiliary members as guests attracted wide-spread attention during the convention. The shows, centered around the Auxiliary's supporting role to physicians, allowed its participants to discuss the Auxiliary's community service activities. One five-minute show was aired each morning, Monday through Wednesday. Subjects included "Why an Auxiliary," "The Doctor's Wife Rose," and "Ac-

cent on Youth." A fifteen-minute Auxiliary show was broadcast at prime time—6:00 p.m.—Monday through Wednesday. Topics covered were "Homemaking Unlimited," "Home Centered Health Care," and "Auxiliary Community Service Projects."

The convention formally opened on Monday, June 17, with the keynote address by Philip Lesly, president of The Philip Lesly Co., a Chicago-based public relations firm and PR counsel to the AMA. Lesly urged Auxiliary members to stress the separate responsibility of the physician and strive for improvements that will overcome criticism of the profession. He recommended that they become a vital part of the health care system, by making sure that the key people in it, the doctors, can work most effectively within it, rather than in isolation.

Milford O. Rouse, M.D., 1967-68 AMA President, spoke on "The Physician's Finest Hour" during the Monday luncheon honoring Auxiliary past presidents and AMA officers, trustees and their wives.

The Auxiliary's annual contribution to the AMA Education and Research Foundation amounted to $389,824.64. Eight state Auxiliaries received awards of merit at the Monday luncheon for having the largest percent of increase or per capita in each of four regions. States having the largest percent of increase were: Vermont, Iowa, North Carolina, and Alaska. States having the largest per capita were: West Virginia, Ohio, Tennessee, and Nevada. Seven county Auxiliaries were recipients of achievement awards: South Central, Idaho; Tuscarawas, Ohio; Macomb, Mich.; Vanderburgh-Southwestern, Ind.; Hamilton, Tenn.; Los Angeles, Calif.; and Flint Hills, Kan.

The Tuesday afternoon communications program featured Mrs. C. Rodney Stoltz, Communications Committee chairman, Mrs. John Wagner, editor, MD'S WIFE, and Mrs. Paul Sauvageot, contributing editor, MD'S WIFE. Following their discussion, which provided helpful suggestions for communicating as individuals and as a group, films emphasizing the role of motion pictures and health education were shown for the remainder of the afternoon. Mr. Ralph Creer, director of the AMA Medical Motion Pictures Department, gave some valuable pointers on how and when to use motion pictures in Auxiliary programs.

In her inaugural address, Wednesday, June 19, Mrs. C. C. Long, Ozark, Ark., suggested focusing Auxiliary programs and an "Accent on Youth." "Not that by any stretch of the imagination do I think that the Auxiliary can solve all the problems of our country," Mrs. Long said, "but I do believe that we can and should do our part for we have a responsibility, as doctors' wives and as citizens, to use what knowledge and what talents we have to help not only the medical profession but this nation of ours."

"We are obligated to help our boys and girls through all the educational means that we have at our disposal," Mrs. Long added. She encouraged Auxiliaries to use wisely available material to implement programs that are needed in their communities.

Other officers installed were: Mrs. John M. Chenault, Decatur, Ala., president-elect; Mrs. G. Prentiss Lee, Portland, Ore., first vice president; regional vice presidents include: Mrs. Lawrence Rapee, Bethesda, Md., Eastern; Mrs. Howard G. Ellis, Des Moines, Iowa, North Central; Mrs. Glenn T. Scott, Jr., Ponchatoula, La., Southern; and Mrs. Lyle F. Murphy, Long Beach, Calif., Western; Mrs. Robert F. Beckley, Lock Haven, Pa., treasurer; Mrs. R. C. L. Robertson, Houston, Tex., constitutional secretary; and directors, Mrs. Thomas Anton, Maine; Mrs. William Blackstone, Wash.; Mrs. Virgil R. Forester, Okla.; Mrs. Amos N. Johnson, N. C.; Mrs. Clare W. Johnson, Ariz.; and Mrs. Wallace Stacey, Mo.

Serving the second year of their terms as directors are: Mrs. George W. Gasser, Utah; Mrs. J. Murray Kinsman, Ky.; Mrs. Jost J. Michelsen, Mass.; Mrs. Paul E. Rauschenbach, N. J.; Mrs. Willard C. Scrivner, Ill.; and Mrs. Herbert J. Ulrich, N. Y.

Additional convention features were:

- A Sunday evening reception honoring Mrs. Ritter and Mrs. Long.
- A Tuesday luncheon honoring the leaders of women's volunteer organizations. Henrik L. Blum, M.D., clinical professor of community health planning, University of California (Berkeley) School of Public Health, discussed "Program Planning and Implementation."
- Reports from state auxiliary presidents.
- Addresses by Mrs. Paul E. Rauschenbach, liaison to Student AMA Auxiliary; Mrs. Frank Gastineau, member, AMPAC board of directors; and Mrs. Margaret Swank, CMA, president, American Association of Medical Assistants.
- A round-up report on the AMA's House of Delegates activities by Ernest B. Howard, M.D., AMA assistant executive vice president.

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

Woman's Auxiliary to the Iowa Medical Society

OFFICERS: 1968-69

President Mrs. James F. Bishop, 212 Hillcrest Avenue, Davenport, Iowa 52803

President-Elect Mrs. Daniel W. Coughlan, 5410 Grand Avenue, Des Moines, Iowa 50312

First Vice-President Mrs. Leland H. Prewitt, 33 Birchwood Hills, Ottumwa, Iowa 52501

Second Vice-President .. Mrs. Phillip H. Tenney, 203 Second Avenue, SW, Independence, Iowa 50644

Recording Secretary Mrs. Eugene Wiley, 30 W. Kings Highway, Sioux City, Iowa 51104

Treasurer Mrs. Joseph F. Veverka, Box 324, Prairie City, Iowa 50228

Corresponding Secretary .. Mrs. Rollin M. Perkins, 125 E. Rusholme Street, Davenport, Iowa 52803

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Parliamentarian Mrs. Dwight C. Wirtz, 4130 River Oaks Drive, Des Moines, Iowa 50312

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District IV Mrs. Leonard H. Boggs, 411 Queens Court, Sioux City, Iowa 51104

District V Mrs. Norman A. Schacht, 1025 N. 23rd Street, Fort Dodge, Iowa 50501

District VI Mrs. Norman L. Reitzel, 104 Country Club Drive, Vinton, Iowa 52349

District VII

District VIII Mrs. J. L. Kehoe, 111 McClellan Blvd., Davenport, Iowa 52803

District IX Mrs. Yme Sloterdyk, 401 W. Terrace Lane, Knoxville, Iowa 50138

District X Mrs. G. B. Bristow, 117 So. Park Street, Osceola, Iowa 50213

District XI Mrs. Jose Martinez, 561 Coglewood Lane, Council Bluffs 51501

1968-69 COMMITTEE CHAIRMEN

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Community Services Mrs. Olin A. Elliott, 4010 Welker Avenue, Des Moines 50312

Finance Mrs. Byron M. Merkel, 730 Polk Boulevard, Des Moines 50312

Health Careers Mrs. Carroll O. Adams, 515 S. Vermont Street, Mason City 50401

Health Education Loan Fund Mrs. William R. Bliss, 2115 Hughes Avenue, Ames 50010

International Health Mrs. Arthur C. Richmond, 1132 Avenue A, Fort Madison 52627

Legislative Mrs. Howard G. Ellis, 5504 Shriver Avenue, Des Moines 50312

Membership Mrs. Leland H. Prewitt, 33 Birchwood Hills, Ottumwa 52501

Mental Health Mrs. Milford D. Hayden, 1125 W. Willow Street, Cherokee 51012



From left to right, top row, President-elect, Mrs. Daniel W. Coughlan, Des Moines; Councilor, District IV, Mrs. Leonard Boggs, Sioux City; Councilor, District X, Mrs. George B. Bristow, Osceola; Councilor, District VI, Mrs. Norman Reitzel, Vinton; bottom row, First Vice-president, Mrs. Leland H. Prewitt, Ottumwa; Treasurer, Mrs. Joseph Veverka, Prairie City; Recording Secretary, Mrs. Eugene Wiley, Sioux City; Councilor, District III, Mrs. Charles Graham, Spirit Lake.

Program and Yearbook ..	Mrs. Phillip H. Tenney, 203 Second Avenue, S.W., Independence 50644
Publications and Publicity	Mrs. Walter B. Eidbo, 1415 Thompson Avenue, Des Moines 50316 Mrs. Dwight A. Mater, 302 S. Fourth Street, Knoxville 50138
Rural Health	Mrs. Samuel P. Leinbach, Route 1, Belmond 50421
Disaster Preparedness and Safety	Mrs. H. A. Weiss, 21st Ave. and 14th Street, Rock Island, Illinois 61202

Special Committees

Annual Meeting	Mrs. Donald D. Kivlighn, 9-23rd Street, Sioux City 51104
Nominating	Mrs. George A. Paschal, 625 N. Oak Park Drive, Webster City 50595
Under Community Services:	
Homemaker Service ...	Mrs. Allan B. Phillips, 3717 Park Avenue, Des Moines 50321
Homebound Handcrafts	Mrs. James Ryan, Jr., 1647-66th Street, Des Moines 50311
Vision Screening	Mrs. Jose Romero, 110 Foster Drive, Des Moines 50312
Volunteer Health Service Award	Mrs. Edward Hertko, 1901 Park Avenue, Des Moines 50315
Administrative Secretary.	Mrs. Hazel T. Lammey, 1001 Grand Avenue, West Des Moines 50265

Have You Heard

Primary Elections Are September 3.
General Election Is November 5.

Are You and All the Other Eligible Members of Your Family Registered to Vote in These Elections?

Who Can Be a Voter? To be eligible to vote in Iowa, you must be a citizen of the United States, must be at least 21 years of age, must have lived in Iowa a minimum of six months, and must be a resident of your county for at least 60 days prior to the election date.

Must You Be Registered to Vote? Yes. Almost all towns and cities in Iowa require citizens to register before they can vote.

Where Do I Register and How? In cities the city clerk's office is in charge of registering voters. In townships the county auditor's office is in charge of registration. Voter registration is accepted at any time of the year except for the nine days just before any election. You will fill out two registration cards and sign both. When you go to vote, the election officials check your signature on your registration cards before they give you a ballot or let you use the voting machine. In most areas the permanent registration system is used. This means that as long as you vote at least once every four years, you do not have to register again unless you move.

Change of Address. You can change the address on your registration either in person or by mail. If it is not convenient to stop at the city clerk's office, you can ask for a removal notice by mail. This notice is a small card on which you give your old address and new address; sign your name and mail it or hand it back to the city clerk's office.

A College Student can register now for the coming elections if he or she will be 21 years of age before election day. Secure absent-voter information at the time you register, and arrange for an absent-voter's ballot.

Service Men and Women. If you have family members in uniform who will be 21 years or over on election day, they can apply in writing to the city clerk's office for absent-voter's registration forms. Then if those forms have been properly filled out and returned, they can vote by absent-voter's ballot.

Absent-Voter Registration Forms. These are made available to persons who will be out of town until after registration deadlines for a coming election, for persons who are sick or disabled, and for persons in the Armed Services. Application is made in writing to the city clerk's office or county auditor's office by the person wishing to register. The return forms must be completed before a notary public, and mailed back to the office of registration at least nine days before the election date.

The Absentee Ballot. An absent-voter's ballot is available, upon request, from the city clerk's or county auditor's office, for the use of a person who is unable to be in his or her precinct on election day, and for the use of a sick or disabled person.

How About Your Friends? Now that you and your family are ready to vote, how about your friends and neighbors? Encourage them to register and vote in the coming election, and give them a helping hand by offering them a ride to the registration office.

What about the Candidates? Know your candidates—personally, if possible. Know their political philosophies, their platforms, both national and state, or the parties they represent, their voting records on pertinent issues if they are incumbents, and their campaign statements if they are newcomers. Discuss with each, or with a member of his campaign team, the political areas of special concern to you and your community.

Coming Next Month: Proposed Amendments to Iowa's Constitution.

—JANET ELLIS
Legislative Chairman

Iowa Wins AMA-ERF Merit Award

The AMA-ERF is $389,824.64 richer this year because of contributions from the Women's Auxiliary to the American Medical Association. Mrs. Carl Ritter, National President, noted that this year's contributions brought to $3,268,256 the amount donated by doctors' wives to the Foundation since 1951.

In the North Central Region, Iowa won the

Merit Award for increasing its donation over the previous year by 55 per cent. The award, a plaque in the shape of the State of Iowa, will hang in the Iowa Medical Society Building.

Mrs. Bernis Wicks, of Boone, is the AMA-ERF chairman for Iowa.

Volunteer Health Service Award

Mrs. Melvin Jensen, 803 Moir Street, Waterloo, was selected to receive the 1968 Volunteer Health Service Award that is presented annually by the Woman's Auxiliary to the Iowa Medical Society.

Mrs. Jensen began her volunteer health-service work in 1950, as a nurses' aide for the Red Cross, working two mornings a week at Allen Memorial Hospital. During the following 10 years she worked wherever she was needed, and her activities included weekly visits, as a Gray Lady, to the Mental Health Institute in Independence.

She collects toys and clothing for the Woodward State School, and visits there frequently. She also assists the physical therapist in her work with the handicapped at Hawthorne School, in Waterloo.

In 1955 when a Waterloo woman opened her basement to eight retarded youngsters—seven boys and one girl—Mrs. Jensen was there helping two afternoons a week. When the Black Hawk County Association for Retarded Children was being organized, she attended the first meeting and faithfully worked toward the establishment of some program for those children. United Services, the Waterloo version of Community Chest, then gave its support to a Recreation Center for Exceptional Children, and the new agency opened in a former rural school between Waterloo and Cedar Falls. Again Mrs. Jensen was there one afternoon a week helping out.

She was one of the first reporters when the Retarded Children's Association began to publish its monthly NEWSLETTER, and at present she is its editor. Her articles are read by the nearly 1,500 recipients of the NEWSLETTER.

She has now started an arts-and-crafts program for the women at the Black Hawk County Home, and she devotes two afternoons a month to it, plus obtaining the materials and planning the projects. Further she assists at the monthly bingo parties for the men at the County Home, and working with others, she has helped arrange tours such as the ones by which the residents were enabled to see the Christmas lights. Transportation had to be arranged for trips on four or five nights so that everyone could be included.

Although no one person can be given full credit for the arrangements that have been set up for the mentally retarded in the Waterloo area, Mrs. Jensen is symbolic of the type of person whose untiring efforts have helped awaken the public to the needs of the retarded. Moreover, Mrs. Jensen has done this despite many personal tragedies.

Around the Hawkeye State

Buchanan County

The Woman's Auxiliary to the Buchanan County Medical Society this year gave $100 to the local hospital for a movie projector for in-service education.

The Auxiliary members eye-screened the local retarded school children, the pre-schoolers on round-up day, and the last of the county schools' lower grades.

Buchanan County had three county winners in the Essay contest this year, and had a fifth-place winner on the state level.

Doctor's Day was celebrated with a buffet dinner, the Auxiliary put on the skit "Heads Up," and each doctor received a pink carnation.

The Outstanding Health Careers Awards went to two persons for activity with Health Careers Clubs. The year ended with a "Spring Ball" and a June luncheon. New Officers were installed. They are: President, Mrs. John Mochal; Vice President, Mrs. Richard Myers; Secretary, Mrs. Philip Tenney; and, Treasurer, Mrs. Richard Moore.

Polk County

The Woman's Auxiliary to the Polk County Medical Society pledged $1,000 for the construction of a ramp at the entrance of the YWCA Building, to be used by the handicapped who are unable to climb stairs. Six hundred dollars of the amount pledged has been paid. A plaque will be placed at the head of the ramp with the name of the donor inscribed.

Graduates of the Des Moines School of Practical Nursing and their families and friends will be honored at a tea from 2 to 4 p.m., Monday, August 12, at Slinker School. Approximately 75 nurses will graduate at this time. Arrangements for the tea have been made by the Woman's Auxiliary to the Polk County Medical Society, with Mrs. James W. Ryan, Jr. and Mrs. William B. Chase, Jr. serving as co-chairmen.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

President-Elect—Mrs. D. W. Coughlan, 5410 Grand Avenue, Des Moines 50312

Recording Secretary—Mrs. E. D. Wiley, 30 West Kings Highway, Sioux City 51104

Treasurer—Mrs. J. F. Veverka, Box 324, Prairie City 50228

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Assistant Editor—Mrs. D. A. Mater, 302 South Fourth Street, Knoxville 50138

Mayo Clinical Reviews

Again this year, the Mayo Clinic is presenting its Clinical Reviews program in the fall. The dates are October 28, 29 and 30, and November 11, 12 and 13. Identical lectures will be given on those two series of days, each of which consists of a Monday, Tuesday and Wednesday. More than 1,000 physicians registered for last year's Clinical Reviews.

The registration fee is $20, and the number of doctors who can be accommodated is necessarily limited. Those wishing to attend should communicate with Mr. M. G. Brataas, at the Mayo Clinic, Rochester, Minnesota 55901, indicating which session they prefer to attend.

Monday, October 28 and November 11

8:35- 8:55 a.m. "Insect Bite: Treatment Program"—Dr. L. L. Henderson
8:55- 9:15 a.m. "Cutaneous Clues to Visceral Malignancy"—Dr. H. O. Perry
9:25- 9:45 a.m. "Immunologic Deficiency Syndromes"—Dr. P. E. Hermans
9:45-10:05 a.m. "Serious Opportunistic Infections"—Dr. D. R. Nichols
10:35-10:55 a.m. "Office Pulmonary-Function Testing"—Dr. N. G. G. Hepper
10:55-11:15 a.m. "Preparing the Patient With Chronic Obstructing Lung Disease for Anesthesia"—Dr. W. W. Douglas
11:15-11:35 a.m. "Anesthesia for the Patient With Chronic Respiratory Disease"—Dr. R. C. Garrison
1:30- 1:50 p.m. "Diagnostic Approach to Hyperlipidemia"—Dr. S. L. Nunn
1:50- 2:10 p.m. "Therapeutic Approach to Hyperlipidemia"—Dr. K. G. Berge
2:20- 2:40 p.m. "Indication and Risk in Valve Replacement"—Dr. D. C. McGoon
2:40- 3:00 p.m. "Problems in Long-Term Management of Patients With Replacement Valves"—Dr. T. T. Schattenberg
3:30- 3:50 p.m. "Present Status of Renal Transplantation"—Dr. G. A. Hallenbeck
3:50- 4:10 p.m. "Hemodialysis and Home Dialysis Programs"—Dr. W. J. Johnson
4:10- 4:30 p.m. "Antilymphocyte Serum and Other Immunosuppressive Treatment"—Dr. R. G. Shorter
4:45- 5:05 p.m. Movie: "Differential Diagnosis of Ulcerative Colitis and Granulomatous Colitis"—Dr. R. J. Jackman
8:00- 9:15 p.m. Panels:
1) "Spinal Anesthesia and Newer Agents for Regional Anesthesia"—Dr. C. J. Restall
2) "Pinched Nerves (emphasis on peripheral lower extremity—peroneal palsy)"—Dr. F. M. Howard and Dr. R. L. Linscheid
3) "Chemotherapy in Malignant Diseases"—Dr. H. F. Bisel, Dr. M. A. Adson, Dr. C. G. Moertel and Dr. R. J. Reitemeier

Tuesday, October 29 and November 12

8:30- 8:50 a.m. "Medical Treatment of Inflammatory Conditions of the Bowel, Regional Enteritis, and Ulcerative Colitis"—Dr. W. G. Sauer
8:50- 9:10 a.m. "Surgical Treatment of Inflammatory Bowel Disease"—Dr. O. H. Beahrs
9:10- 9:30 a.m. "Care of the Colostomy and Ileostomy"—Dr. D. C. McIlrath
9:45-10:05 a.m. "Clinical Aspects of Dysproteinemias"—Dr. J. E. Maldonado
10:05-10:25 a.m. "Intravascular Coagulation and Fibrinolysis Syndromes"—Dr. P. Didisheim
10:55-11:15 a.m. "Gastric Analysis—Why? When? How?"—Dr. D. A. Wolochow
11:15-11:35 a.m. "Iron Deficiency"—Dr. V. F. Fairbanks
12:00 noon Luncheon—Round Table Discussions
1:30- 1:50 p.m. "Brittle Diabetes"—Dr. C. F. Gastineau
1:50- 2:10 p.m. "New Concepts in the Treatment of Lymphoma"—Dr. D. S. Childs
2:20- 2:40 p.m. "New Aspects of Rh Factor and Rh Antiserum"—Dr. E. A. Banner
2:40- 3:00 p.m. "Management of Missed Abortion"—Dr. J. S. Welch
3:00- 3:20 p.m. "Induction of Ovulation"—Dr. R. D. Kempers
3:55- 4:15 p.m. "External Eye Problems and the Family Practitioner"—Dr. D. M. Robertson
4:15- 4:35 p.m. "Diagnosis and Treatment of Acute Knee Injuries"—Dr. R. S. Bryan
4:45- 5:05 p.m. Movie: "Percutaneous Cordotomy"—Dr. A. Uihlein
8:00- 9:15 p.m. Panels:
1) Urology
A. (Benign Hyperplasia)
"Does My Patient Need Surgery, Doctor?"—Dr. L. F. Greene
"Surgical Treatment"—Dr. W. L. Furlow
B. (Carcinoma of the Prostate)
"Do I Have Cancer, Doctor?"—Dr. F. J. Leary
"Treatment"—Dr. O. S. Culp
2) "Newer Drugs in Treatment of Hypertension"—Dr. A. Schirger and Panel
3) "Adverse Reactions and Interaction of Common Drugs in Clinical Practice"—Dr. F. J. Kazmier, Dr. G. A. Peters, Dr. R. W. Hill and Mr. C. Thompson

Wednesday, October 30 and November 13

8:30- 8:50 a.m. "Orthopedic Examination of the Newborn"—Dr. H. A. Peterson
8:50- 9:10 a.m. "Malaria—an Ancient and Recurring Problem"—Dr. J. H. Thompson, Jr.
9:20- 9:40 a.m. "Intravenous Fluids in Infant Diarrheas: How Much and What Type?"—Dr. W. E. Segar
9:40-10:00 a.m. "Acute Otitis Media in Children"—Dr. E. C. Burke

10:30-10:50 a.m. "Indications for Surgery of Infant Heart Defects"—Dr. W. H. Weidman
10:50-11:10 a.m. 'The Arteritides"—Dr. J. W. Joyce
11:10-11:30 a.m. "Renal Function Test in Hypertension Including Renin-Angiotensin System" —Dr. M. K. Burbank
12:00 noon Luncheon—Round Table Discussions
1:30- 1:50 p.m. "Transrectal Needle Biopsy"—Dr. M. J. Anderson
1:50- 2:10 p.m. "Medical Treatment in TIA"—Dr. R. G. Siekert
2:20- 2:40 p.m. "Acute Head Injury (medical treatment)"—Dr. R. C. Burton
2:40- 3:00 p.m. "Acute Head Injury (neurosurgery)" —Dr. C. S. MacCarty
3:30- 3:50 p.m. "Handling the Compulsive Patient"—Dr. N. E. Krupp
3:50- 4:10 p.m. "The Hyperactive Child—Child Psychiatry"—Dr. J. G. Delano
4:10- 4:30 p.m. "Physical Therapy for Arthritic Patients"—Dr. G. M. Martin

Bubble Baths Cause Irritations of Urinary Tract in Children

Although in 1955, R. J. Simmons, M.D., reported on the high incidence of vulvovaginitis in women attributable to the use of detergent or perfumed soaps in bubble bath and, 10 years later, S. Marshall, M.D., suggested the possibility of these preparations leading to irritative symptoms of the lower urinary tract in children, bubble bath preparations still are being regularly added to the bath water of many children in the United States and Canada.

The irritant effect of bubble bath on the lower urinary tract of children is likely to assume greater proportions as this bathing practice grows in popularity. As a result of conclusions from the California Norton Air Force Base medical study, Harold N. Bass, M.D., Base Chief of Pediatrics, advised physicians to inquire about the addition of bubble bath, detergents or perfumed soap to the bath water when confronted by patients with irritative symptoms of the lower urinary tract.

In supporting his statement, Dr. Bass said "From August, 1966 through July, 1967, 16 children were diagnosed at the Base as having had urethral or bladder irritation attributable to the regular use of bubble bath preparations." The examinations revealed the physical condition of the children studied to be excellent. However, in each case, complaints of urinary burning in the meatus region or at the penile tip, daily blood stains, lower abdominal pain and/or urinary frequency were cited.

In each situation, when the bubble bath was discontinued, these symptoms decreased in frequency until the child was asymptomatic.—(" 'Bubble Bath' as an Irritant to the Urinary Tract of Children," in CLINICAL PEDIATRICS, March, 1968)

Advisory Council on Comprehensive Health Planning Appointed

In May, Governor Harold Hughes appointed a 31-member Comprehensive Health-Planning Advisory Council as part of the implementation of the Comprehensive Health Act and Public Health Service Amendments of 1966. The Act is intended to promote effective federal-state-local partnership in comprehensive planning, and authorizes federal funds to assist states and communities in that activity.

Members of the Council were selected from local and state agencies, voluntary groups and professional organizations, and in accordance with federal regulations a majority of consumer representatives were named. The plans on which the group will give advice will be in the areas of health services and facilities and health manpower, among others.

Among the 16 consumer representatives are Mr. Connie Bodine, of Iowa Beef Packers, Inc.; Mr. Roy Cottier, of Massey-Ferguson, Inc.; Mr. Richard Dean, of the Iowa Heart Association; Mr. Carroll Eichner, of the Jasper County Mental Health Center; Mrs. Louise Goldman, of the Scott County Mental Health Center; Mr. Jake Mincks, of the AFL-CIO; Mr. William Pierce, of Creston Community College; Mr. Harry Holtze, of the Siouxland Health Planning Council; Mr. A. J. Shakeshaft, a professor of political science; Reverend M. O. Smith; Mr. A. L. Smulekoff, of the Linn County Health Center; Mr. Maurice Te Paske, an attorney; Mr. G. O. Thompson, of the American Cancer Society, Iowa Division, Inc.; Mr. Maurice Wagner, of the St. Regis Paper Company; Mr. Elmer Den Herder, a member of the State House of Representatives; and Mr. Donald McGill, likewise a member of the Iowa House.

Included among the 15 provider representatives are: Mr. Kenneth Barrows, of the Bankers Life Insurance Company; Mr. Howard Benshoof, of the State Department of Public Instruction; Dr. Julius Conner, director of the Des Moines-Polk County Health Department; Dr. J. O. Cromwell, director of state mental institutions; Mr. Arthur Downing, of the State Board of Social Welfare; Mr. Alden Godwin, a nursing home owner; Miss Helen Henderson, of the Iowa Association for Retarded Children; Dr. John Herrick, a veterinarian; Dr. J. C. MacQueen, of the State Services for Crippled Children; Mr. Paul Morgan, a professor of sanitary engineering; Dr. H. L. Skinner, a surgeon; Dr. Albert Soucek, a dentist; Nurse Marian VanFossen, of the Public Health Nurses Association; Dr. T. F. Vigorito, of the Des Moines College of Osteopathic Medicine and Surgery; and Dr. H. B. Weinberg, a physician.

Agape

REV. FR. R. FRANKLIN TERRY
Sioux City

We are often struck by the subtle and the not-so-subtle ironies of life and history. One of the not-so-subtle ones is that Christians make much of the word *love,* and seem at the same time to know very little about what love is, and what it means. Those of us who work with people are, I am afraid, among those who are inclined to extol the virtues of love, on the one hand, but on the other to miss the passing opportunities to be the incarnate expression of love to our neighbors.

The New Testament zeros in on this problem again and again in many different contexts, and in so doing it corroborates the high wisdom of the Covenant ethic which we find in the Old Testament. The Covenant ethic which provides the dominant theme in the unfolding history of Israel consists of what has been called "a relationship of reverence and affection" between God and man. That phrase strikes us as very nice, and also very safe. What could be more agreeable than a relationship of reverence and affection between God and man? It would seem to be just what the doctor ordered.

This is one of the problems which those of us who feel that there still is a good reason to talk about God must face up to. Actually it is one of the biggest problems for those who believe in God, for belief in God is too often either a matter of what one says and does in church, or an exclusively private affair which has very little to do with who one is or what one does in the world. The so-called "relationship" of reverence and affection which, it seems to me, is the basic stuff of the Judeo-Christian ethic is much more than an affair which can be kept locked up in the churches and in our private devotional closets. Please don't misunderstand me. I believe in going to church and in saying prayers. I believe in the reverence and affection between God and man which is expressed in the language of liturgy and prayer—so long as it nourishes the life of love in action!

Someone has remarked that man is a creature of two orders—of two dimensions. He belongs to a temporal and to an eternal realm. The unique insight of the Judeo-Christian tradition is that these two orders are not separate; they are one. The Christian doctrine of the incarnation is not simply a magical formula which somehow explains how Jesus was God and man at the same time. It has often been mistaken for that by believers and disbelievers alike. The doctrine of the incarnation confirms and underscores the sensibility of the Jews regarding the relationship between God and this world—between God's time and our time—between God's love and our love. They are inseparable. The eternal love of God takes on the stuff of history—of human history, of worldly history. Christianity is not a faith of the sweet by and by; it is a faith informed by the Cross, a faith that moves into the depths of human tragedy, even as it points beyond tragedy to that city where death shall be no more, nor mourning, nor crying, nor pain.

The hope of man, of which religious faith speaks, is not the hope of some other world; it is the hope of this world, and of the people who live and suffer in this world. The Christian hope which is based on the notion that God is love is not the kind of hope which negates and despises human history; it is that hope which is grounded in our history as men and women, and which offers the possibility of *salvation*—a word which means simply to heal, to make whole again. Paul Tournier the French psychiatrist speaks of what he calls "the whole person in a broken world."

THE GREEKS HAD THREE WORDS FOR IT

Now let me say once again that in our pursuit of religion and of things religious, as in using the word *love,* we somehow overlook the context in terms of which love takes on the reality of flesh and bones. There is hardly anyone who would admit that he doesn't know what love is. But there is quite a difference between knowing and doing the truth. I should like to suggest that we really aren't too clear about what love means. Part of the difficulty is that we use the word for too many different purposes—to express too many different moods. The word is a part of the languages of sexual encounter, of religious devotion and of casual conversation when, for example, we express delight or feelings of momentary pleasure. So the meaning of the word depends upon its context.

This was Father Terry's contribution to a panel discussion on love at the 1968 state convention of the Iowa Association of Medical Assistants.

upon the situation, upon the tone of voice and upon the facial expression.

We use the word so much and in so many different contexts that it has lost its "oomph" when we really need it. Speakers of other languages don't have quite the same problem. In Greek, for example, there are separate words with which to express the different meanings of our word *love*. *Eros* connotes sexual love; *phileo* means brotherly affection; and in the New Testament we find a special Greek word for the kind of love which is exemplified in Christ—*agape,* which means suffering love.

Unlike *eros* and *phileo, agape* recognizes the coming together of the horizontal and the vertical dimensions of human life. Unfortunately, religious language often leaves us with the impression that there is only one dimension, the vertical. It suggests that God is up there, while we are down here. The religious problem, then, is how to get from down here to up there, with dispatch. It was all of the imagery that goes with this up-and-down business that Sigmund Freud, for one, felt we could quite well get along without. In fact, he thought, we could get along *much* better without it. He said it had something to do with a father fixation transposed into a sacred dimension. He suggested we be much more scientific than that.

He had a good point. But Freud overlooked the other dimension—the horizontal dimension of religious language. Freud was not alone in making that mistake. We all make it, much of the time. It is one way that we manage, consciously or unconsciously, to keep from recognizing the horizontal obligations of religious faith—the kind of obligation which ties us to brother and neighbor. This is the big "sleeper," the problem which has more to do than any other with our relationships, whether they are those of our profession, where neighbor is patient, or student, or the relationships in our other neighborhoods of political, social or economic concerns.

LOVE OF GOD AND LOVE OF MAN ARE IDENTICAL

When I was a seminary student, my colleagues and I were supposed to be learning the techniques of hospital visitation. We were cutting our teeth on the so-called non-directive theory of counseling. We all got quite a chuckle out of one local clergyman who would walk into the hospital room, stand at the foot of the patient's bed and say: "Good afternoon. Let us pray." He then would read a prayer for the sick from his prayerbook, and quickly leave the room. We thought we had a much better technique than that. We would enter the room, walk to the side of the patient's bed, and offer a sympathetic ear. We thought we really had agape. One day I asked the nurse at the desk to tell me when Mrs. Smith, in Room 203, would be going home. I had been to see her several times, and was quite certain that my sympathy and understanding for her condition had had much to do with her recovery. The nurse told me that Mrs. Smith wouldn't be going home, that she was dying of cancer. After that I couldn't laugh again at the pastor who went in, read from his prayerbook and left. I had been as insensitive and as uncaring and unloving as he—every bit as unable to be an ambassador of God's love as he!

That was one of the horizontal problems. Perhaps we know well enough what love means. But do we know how to express it? We are like the "bitter comforters" in the book of Job who thought they could talk Job out of his suffering by explaining it to him. I suppose that people in the medical profession and in the ministry of the church have a similar problem in this regard. We are intent on healing and on the techniques of healing, so we sometimes forget how to love people in spite of their illnesses.

So we come again to the central concern—at least for me as a Christian it is central, for I can't get away from it and still be a Christian. The central concern is what it means to love. Even as notable a skeptic as Bertrand Russell said once that if he had to name the one quality which alone could save the world from destruction, it would be Christian love. He admitted that he was almost embarrassed to say it. Part of our difficulty is that we say it so often we don't know what it means.

In Dostoyevsky's novel THE BROTHERS KARAMAZOV, Father Zossima defines hell as "the suffering of being unable to love." We hear much these days about law and order; I think we need to hear more about love and justice—the kind of love and justice which we find described in the Old and New Testaments. The object of that kind of love—agape—is not to make our lives, our communities, our world more *Godly,* but to make them more *human.*

One thing that helps me remember what it means to love in this sense is a remarkable series of verses in the first book of John. The apostle is reminding his readers that the love of God is not some kind of esoteric elixir that intoxicates people out of their problems. It is not something which emerges on the scene at the last moment of the last act, like the *deus ex machina* of an ancient Greek or Roman drama—or like the Lone Ranger or Agent 007 or more recent vintage.

The love of God, he says, is revealed when a man meets his brother. That is what Martin Luther King was all about. This is the way the Apostle John puts it: "No man has ever seen God; if we love one another, God abides in us and his love is perfected in us. . . . If any one says 'I love God,' and hates his brother, he is a liar; for he who does not love his brother whom he has seen, cannot love God whom he has not seen."

It took practical wisdom to see that. It takes much practical wisdom and pure grace to understand it and to do it. I think it was W. H. Auden who said, "We must love one another, or die." That is true not only in terms of the everyday tasks and responsibilities we face in our professions, but in terms also of the larger problems of our society and our world.

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Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

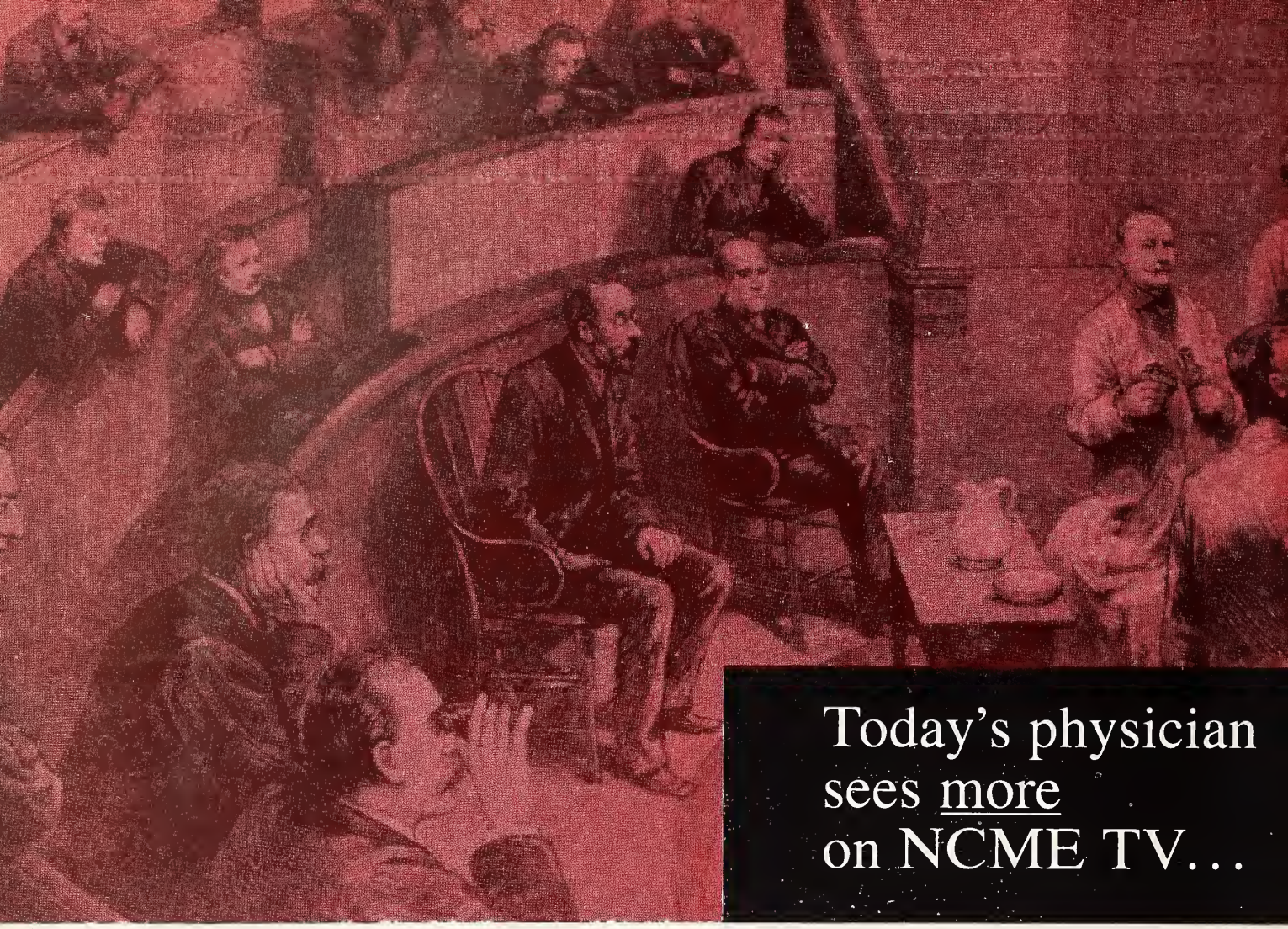
Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

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In Dr. Sawyer's view, gas endarterectomy has several advantages over mechanical methods: the operation can be completed faster, causes less damage to the arteries and offers a more successful outcome.

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Personals



Dr. Lewis E. January, professor of internal medicine at the U. of I., participated in a special conference on the problems of heart transplantation held in June in Geneva, Switzerland. Dr. January, immediate past-president of the American Heart Association, was among three scientists from the United States invited to the conference, which was called by the Council for International Organizations of Medical Sciences. The conference considered immunological and clinical problems of heart transplantation, the definition of death, and the moral and legal aspects of heart transplantation.

Dr. Richard F. Looker, a Cedar Rapids pathologist, has been elected chairman of the Linn county chapter of the American Red Cross for 1968-1969.

Dr. James Walston, a South Sioux City physician, formerly of Graettinger, and his daughter, Renee, were reportedly showing improvement at a Rochester, N. Y., hospital where they were admitted on June 6 after suffering severe injuries in the crash of a private plane which claimed the life of Mrs. Walston. At the time of the crash, Dr. Walston was flying his light plane, a Beechcraft Bonanza, in a hilly, remote section of northern Steuben County, N. Y., enroute to visit his mother. Cause of the crash was not immediately determined.

Dr. Donald Abrams, of Goldfield, terminated his practice of medicine there on July 1. Dr. Abrams moved to Goldfield in August, 1967.

Two psychiatric physicians have been added to the Mental Health Institute staff in Clarinda. Taking over their offices on June 1 were **Drs. Namalwar Rajan** and **Albert Recio.** Dr. Rajan was originally from Burma, where he took his pre-medical work from 1932-36 and his medical schooling in 1936-41. He had gone to Hong Kong, from where he made application, when he learned there was a position open in Clarinda. He arrived in the United States on May 10. Dr. Recio has spent most of his years in France and Cuba. He took his high school work at Lycee St. Louis while his father was with the Pasteur center in France. He was graduated from the University of Havana. Dr. Recio escaped from Cuba in a ferry boat when Castro took over his country. He has been in the United States since 1959. After arriving in this country he was employed by a Miami Hospital and attended the University of Miami. He later practiced in Chattanooga, Tennessee.

Dr. Dennis H. Nugent began the practice of surgery in Sheldon the last week of July. His office is located in the Sheldon Clinic building, 712 Fourth Avenue. **Dr. R. E. Griffin** will continue to maintain his office in this building. Dr. Nugent has just completed two years of service as a Lieutenant Commander in the United States Navy. A native of Churdan, Iowa, Dr. Nugent took his pre-medical schooling at the U. of I. and earned his M.D. degree there in 1961. He took his internship at Hurley Hospital, in Flint, Michigan, and his residency at this same hospital. Dr. Nugent became a diplomate of the American Board of Surgery on February 20, 1967.

Dr. John R. Kersten, of Fort Dodge, was among 120 specialists in internal medicine from 34 states, Canada and Saudi Arabia attending a postgraduate conference June 10-14 at the U. of I. Purpose of the conference was to present new knowledge about the diagnosis and treatment of diseases encountered by the practicing internist.

Dr. Constantine Antonatos, an Estherville pathologist at the Holy Family Hospital there, was notified in June that he had been certified by the American Board of Pathology in two areas: anatomical and clinical pathology.

On Tuesday, June 11, **Dr. and Mrs. E. C. Wagner** were honored by the people of Plainfield for 22 years of service to their community. They plan to move to Albuquerque, New Mexico, where Dr. Wagner expects to continue the practice of medicine.

Dr. E. A. Kjenaas, of Cherokee, is a newly-appointed psychiatrist and medical director for the Northwest Iowa Mental Health Center. He replaces **Dr. John Chestnutt,** who recently moved with his family to Louisiana, where he will be director of a mental health center. Dr. Kjenaas, a native of Sioux City, attended schools in Minneapolis. He entered psychiatric training at Cherokee Mental Health Institute in 1962. He will also work part time at the health center in Spencer.

Dr. James M. Tierney, a Carroll internist, was elected president of the Iowa Society of Internal Medicine for 1968-69 at the society's annual meeting in Des Moines. **Dr. Edward J. Hertko,** of Des Moines, was reelected secretary-treasurer.

Dr. Russell H. Watt, of Marshalltown, spoke at a dinner meeting of the Tama County Registered Nurses on Monday, June 10. His subject was the importance of early detection of amblyopia. Dr. Watt is a member of the Board of Directors of the Iowa Society for the Prevention of Blindness.

Observing their 35th year in the practice of medicine in Independence and the surrounding community are **Dr. Nelson L. Hersey,** who came to Independence on May 15, 1933 to join the Shellito-Agnew clinic, and **Dr. Paul J. Leehey,** who established his medical practice there on July 1 of that year. Both doctors took their training and received their degrees from the University of Iowa



Nelson L. Hersey, M.D.



Paul J. Leehey, M.D.

College of Medicine. Dr. Leehey established his office in Independence after three years on the medical staff at Fort Leavenworth. Dr. Hersey came to Independence after practicing two years in Spirit Lake, Idaho, where among his duties he served as a doctor for the Panhandle Lumber Co. Dr. Leehey and Dr. Hersey are truly the typical family doctors who have enjoyed the life of physicians in a typical Iowa county-seat town.

Dr. Joseph A. Heaney recently opened a solo practice of psychiatry and neurology at 803 Twenty-fourth Street, Ames. He is a 1955 graduate of the Jefferson Medical School, and got his specialty training at the Eastern Pennsylvania Psychiatric Institute, the Einstein Medical Center and the Psychotherapeutic Institute of the Pennsylvania Hospital. Subsequently, he did psychopharmacologic research and taught in the Department of Psychiatry at the University of Pennsylvania. He was a captain in the U. S. Air Force in Germany from 1956 to 1958. He and Mrs. Heaney have five children, and they came to Ames several months ago.

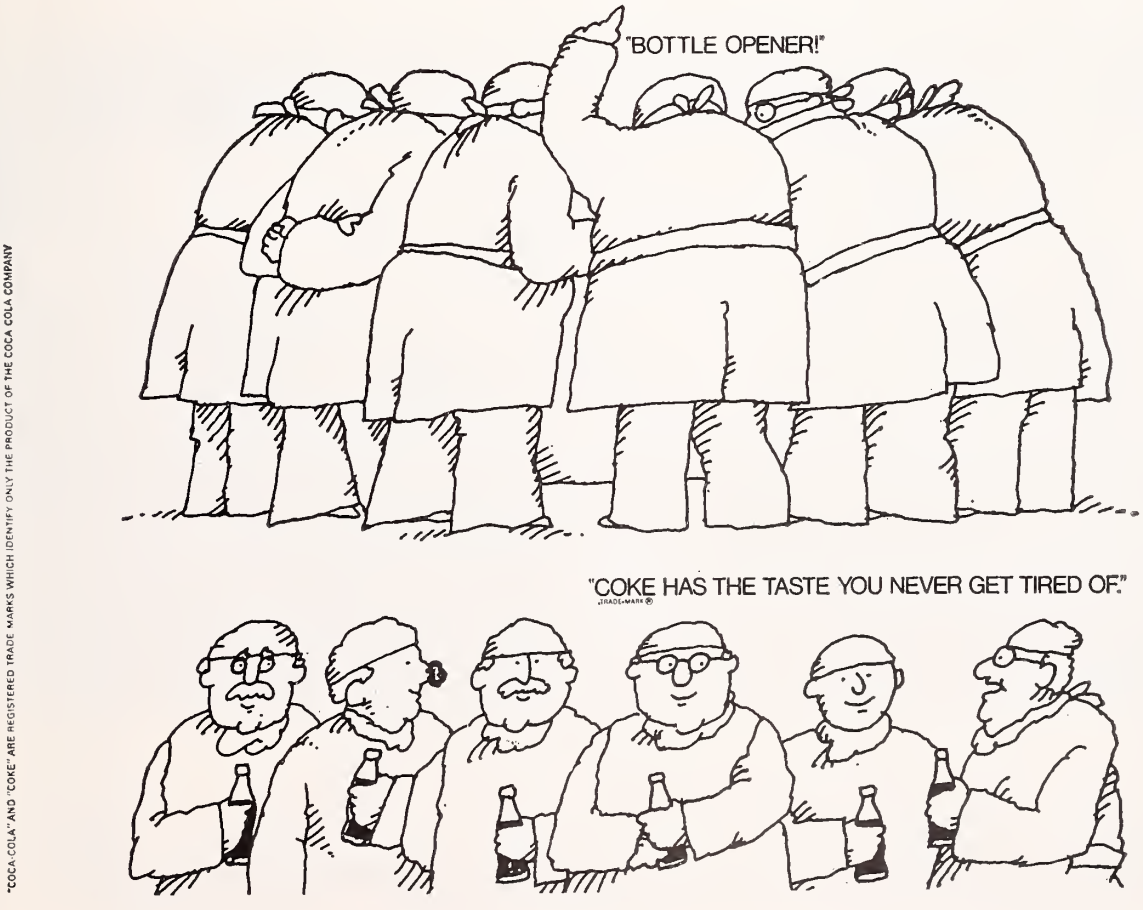
THE DES MOINES TRIBUNE for June 21 told of a request made to the State Board of Health by the Polk County Welfare Board for an investigation of the likelihood, asserted by **Dr. George A. Kern,** of Des Moines, that many of the indigent elderly may be getting inadequate medical treatment in some nursing homes in the city. Dr. Kern's letter to the Welfare Board was accompanied by two photographs of an elderly man who had been ad-

mitted to a local hospital with a vascular occlusion that had turned a foot and leg black and blue three days earlier. In addition, he said, the patient was suffering from large bed sores that had been bandaged with "brown colored sheets" which had been torn into strips. "I do not wish to name names," he was quoted as saying, "but I want to point out some of the care the elderly of low income are receiving in some of the so-called nursing homes around the city. This same picture could fit any number of homes in Des Moines." He thought the direct cause was a paucity of nursing care, and the indirect cause was insufficient and/or tardily remitted payments to nursing-home proprietors for the care of such patients.

A five-year study aimed at improving the long-term survival of men who have had heart attacks is under way at the U. of I. College of Medicine, and at 54 similar institutions throughout the country, under the sponsorship of the National Heart Institute. **Dr. Donald L. Warkentin**, an assistant professor and cardiologist in the Department of Internal Medicine is in charge of the Iowa City segment. From 150 to 160 men will participate at the U. of I., and volunteers are being sought. To be eligible, a man must have had one or more documented coronary attacks, he must be between the ages of 30 and 64, and he must not be receiving insulin or anticoagulants. Moreover, his physician must have consented. Men in the study group will be given various ones of four drugs that have been thought capable of reducing the levels of cholesterol and other fatty substances in the blood. It is hoped that one or more of these agents may reduce five-year mortality by at least 25 per cent.

Mr. William B. Recknor, executive director of Iowa Medical Service, has been appointed to the National Association of Blue Shield Plans' three-man Committee on Relations with the National Association of Insurance Commissioners.

At the Cancer Research Day, in Iowa City on June 16, cosponsored by the U. of I. College of Medicine and the American Cancer Society, Iowa Division, Inc., one of the principal events was the premiere showing of a new professional film, "Diagnosis and Treatment of Cancer of the Prostate," which **Dr. Rubin H. Flocks**, head of urology at the U. of I., had had a share in producing.



Dr. Arnold L. Nelson, a Des Moines surgeon, retired at the end of June from the medical directorship of the National Travelers Life Insurance Company. He had held that post for only about four years, but had been a medical examiner for the firm for some time previously. He intends to devote full time, henceforth, to his private practice.

In mid-July **Dr. John W. Keiser** completed a two-year internship at Broadlawns-Polk County Hospital and, with his wife and two sons, left for a six-month stay in Belgium. Under the sponsorship of the Christian Committee for Service in Algeria he will, hopefully, acquire a command of the French language there, and then will go on to Northern Africa for two years of medical missionary work. His boyhood home was at Kalona.

At the New Homestead, in Guthrie Center on June 25, **Dr. R. J. Peterson,** of Panora, addressed 20 nurses and nurses aides on the rehabilitation of heart-disease and stroke patients. The program was sponsored by the Guthrie County Heart Unit, and the director of inservice training for nurses and the director of physical therapy service from Jennie Edmundson Hospital, Council Bluffs, also spoke.

Dr. Donovan F. Ward, a Dubuque surgeon, has been elected to the board of directors of Life Investors, Inc. Dr. Ward was one of the founders of the firm—a holding company the principal subsidiaries of which are life insurance companies and banks.

Dr. Earl Parsons, a Burlington psychiatrist, has submitted his resignation, effective in September, as medical director of the Mental Health Center there. He also has had a private practice in Burlington, but when the BURLINGTON HAWKEYE-GAZETTE made the above announcement it hadn't been able to learn whether he intended continuing.

On July 1, **Dr. Carl D. Oelrich** closed his general practice at Sioux Center that he began in 1934. According to the SIOUX CENTER NEWS, his plans for the future are indefinite.

Dr. Robert J. Martin joined the Cherokee Clinic group, in Cherokee, last month, after two years' duty at the U. S. Air Force hospital at Offutt Field, Omaha, where he was chief of surgery and surgical consultant for the Strategic Air Command. The son of **Dr. and Mrs. J. W. Martin,** of Holstein, he got his M.D. degree at the University

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of Nebraska in 1961 and interned at Nebraska Methodist Hospital; he received his surgical training at the Kansas University Medical Center. He and his wife have a daughter three years old and a son 10 months old.

Dr. Harry D. Harper, Sr., of Fort Madison, is the new chairman of the Iowa Civil Rights Commission. He was born in Fort Madison, he did his undergraduate college work at the University of Iowa, and he took his M.D. degree at Howard University, Washington, D. C. The immediate past-president of the Fort Madison branch of NAACP, he has been active in civil rights work since its beginnings in Iowa, for in 1954 **Governor Leo Hoegh** made him a member of his Study Commission on Discrimination in Employment.

In July, 1965, Dr. Harper was appointed a member of the Iowa Civil Rights Commission, and he has been its vice-chairman since November, 1967. His term as chairman will expire on July 1 of next year, but his membership will continue at least until July 1, 1971.

Dr. William C. Rosenfeld, a cardiologist, has joined **Drs. L. W. Swanson, H. G. Marinos** and **J. Stephen Westly,** in Mason City. He was born in Council Bluffs and reared in Storm Lake. He took his undergraduate work and his basic medical training at the University of Iowa, and got his M.D. in 1961. He interned at Philadelphia General Hospital, and then spent 2½ years in a U. S. Navy uniform. He only recently completed his residency at the University of Iowa Hospitals.

Dr. Lewis J. Garrotto, a radiologist, recently began practice in Burlington. He did his pre-medical work at Washington University, St. Louis, got his M.D. at the University of Iowa College of Medicine, and served in the U. S. Air Force for three years. He and Mrs. Garrotto have two sons and two daughters.

Dr. Herbert H. Kersten, a Fort Dodge surgeon, had a coronary attack on July 11. Fortunately it was a mild one, and at this writing he is getting along quite satisfactorily.

At Lutheran Hospital, Fort Dodge, on June 23, **Dr. Charles Wilson,** of Manson, was set upon by a man, said to have been intoxicated, who wanted him to care for someone whom he had accompanied there. Dr. Wilson told him that he couldn't, for he was hurrying to the aid of an extremely ill patient. The man seized Dr. Wilson, but after a brief struggle the attacker fell backwards across the hallway and through a plate glass window. Dr. Wilson was uninjured; his assailant suffered a broken arm and serious cuts about the head.



Pictured with Dr. Thomas J. Egan, of Bancroft, on June 3 after he had received the Creighton University Alumni Achievement Citation, are his four sons. From left to right are Dr. Thomas F. Egan, a radiologist, St. Louis, Missouri; Dr. William P. Egan, an assistant professor of psychiatry at Creighton University, in Omaha; Dr. Thomas F. Egan; Dr. Richard M. Egan, who received his M.D. degree at Creighton on the same day his father was honored; and Dr. James J. Egan, an obstetrician and gynecologist, in Daytona Beach, Florida. Dr. Egan senior had been unanimously selected by the members of the executive council of the Creighton University Alumni Association to receive its Alumni Achievement Citation. It is given at graduation time each year to a former graduate who has brought distinction to his alma mater.



Clinton Berryhill, M.D., of Readlyn, has announced his candidacy for the post of state representative from Bremer County in the forthcoming Democratic Party primary election. He is a 1956 graduate of the U. of I. College of Medicine.

Dr. Samuel D. Porter, a 1960 medical graduate of Creighton University and most recently an associate in surgery at University Hospitals, Iowa City, has joined Surgical Associates, Mason City. He interned in Iowa City, and from 1962 to 1965 he was a captain in the Army Medical Corps. He and Mrs. Porter have four children. The other members of the group are **Drs. E. H. Barg, F. C. Brush, Alfred J. Herlitzka, John K. MacGregor, Robert E. McCoy, Jerome F. Paulson, B. Raymond Weston,** and **Warren V. Wulfekuhler.**

A reception in honor of **Dr. B. L. Basinger** was held on Sunday, July 14, in the Goldfield Community High School building, under the joint sponsorship of the Goldfield Businessmen's Club and Lions Club and American Legion post. He was recognized for his many years of loyal service both as a doctor and a community leader.

A general surgeon, **Dr. Donald J. Ahrenholz,** has been added to the staff of Medical Associates, Cedar Falls. He is a 1959 graduate of the U. of I. College of Medicine, he interned at Cook County Hospital, Chicago, and he had been assistant chief of surgery there from 1966 until he left to come to Cedar Falls. He and Mrs. Ahrenholz have three children. The seven previous members of the Medical Associates group are **Drs. E. Robert Blue, Robert N. Bremner, M. G. Ericsson, James O. Hoover, John R. Jaquis, M. Neil Williams** and **Paul L. Warner.**

Dr. Hiram J. Leonard, a surgeon, has joined **Drs. John L. Powers, Donald E. Wolters** and **A. E. Montgomery** in practice at Estherville. Dr. Leonard is a 1963 graduate of the U. of I. College of Medicine who interned in Salt Lake City and served his residency in Iowa City. His boyhood home was at Holstein. The Leonards have four children.

Hon. Neal Smith, representative in Congress from the Fifth District of Iowa, announced on July 5 that the USPHS had approved a $412,841 grant to finance the first year of a three-year project for the Iowa Regional Medical Program. He said that pilot programs in Des Moines and Mason City would train hospital personnel in the comprehensive care of stroke patients, but the headquarters will remain in Iowa City.

Dr. Mike Fox, a 1967 graduate of the U. of I. College of Medicine, is assisting, this summer, with the general practice of **Dr. Burns M. Byram,** in Marengo. He recently completed his internship at Montreal General Hospital, and he is to begin a tour of duty with the U. S. Army Medical Corps in the fall.

Dr. Louis H. Fingerman, of Des Moines, became board certified by the American Board of Ophthalmology in June.

Dr. Robert Gauchat, an associate professor in the Department of Pediatrics at University Hospitals, attended the Iowa Commission on Children and Youth meeting held in Des Moines on Wednesday, May 29. It was a joint meeting with members of the Iowa Crime Commission to consider methods of implementing a Crime Commission Report, on the prevention of juvenile delinquency and juvenile crime in Iowa. Dr. Gauchat is chairman Commission on Children and Youth.

Dr. Charles Reed, a professor in the Department of Pediatrics at University Hospitals, spoke to the Iowa Diabetes Association on "Emotional Problems of Diabetic Children." The meeting was held in Des Moines on May 28.

Dr. Lloyd Filer, a professor in the Department of Pediatrics at University Hospitals, presented a paper on "Nutrition, Cell Growth and the Development of Obesity" to the National Institute of Child Health and Development in Asheville, North Carolina, on May 19-22.

Dr. Hans Zellweger, a professor of pediatrics at University Hospitals, gave a lecture on the "General Aspects of the Pathogenesis of Congenital Anomalies" at a meeting of the Iowa Chapter of the American College Surgeons held in Iowa City on June 1.

Dr. H. Stanley Thompson, an assistant professor of ophthalmology at the U. of I. Medical Center, has been given a Research Career Development Award by the U. S. Public Health Service. Dr. Thompson was selected for the award by the National Institute of Neurological Diseases and Blindness.



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Dr. Arthur P. Long, who gave up the post of state health commissioner on July 1, was made an honorary member of the veterinary-medical honor society Phi Zeta on April 16. He was given a certificate of appreciation by the Des Moines-Polk County Health Department on April 17, and in mid-May the Iowa Public Health Association gave him its Individual Achievement Award.

Dr. John D. Caulfield, an EENT specialist with the Medical Associates group in New Hampton, retired from practice on May 8 because of poor health.

Dr. Wayne Severson, who has practiced at Slater for 20 years, and who recently has been serving part-time as a consultant in the offices of Blue Shield, in Des Moines, is now devoting full time to his work with Blue Shield.

Dr. John L. Duffy, a medical graduate of the University of Wisconsin who interned at Mercy Hospital, Des Moines, and for the past three years has been a resident in psychiatry at the Mental Health Institute in Independence, has accepted a teaching position in the Department of Psychiatry at the University of Minnesota Medical School.

On or about September 1, **Dr. Harold J. Madsen** will retire. He has been director of the Veterans Administration Hospital at Knoxville, Iowa, since March, 1963, and has been in federal service for 31 years. He and his wife recently bought a home in Sioux City, to which they plan to move. Both of them lived there as youngsters.

Dr. Linda Meyers Fahr, the daughter of **Dr. and Mrs. Paul Meyers,** of Bloomfield and the daughter-in-law of **Professor and Mrs. Samuel Fahr,** of Iowa City, was one of the 1968 graduates of the U. of I. College of Medicine. Dr. Meyers is a radiologist, and Professor Fahr is a faculty member in the U. of I. College of Law.

An addition is being built at the office building belonging to **Drs. J. T. Worrell** and **Kiyoshi Furumoto,** in Keosauqua. It is an Iowa "first" if, as a newspaper story intimated, it was necessitated by their needing more space for their employee who does federal-program and private-insurance paper-

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work. The room she formerly occupied is being converted into an additional examination room.

July 5 marked the thirty-fifth anniversary of **Dr. C. R. Osborn**'s entry into private practice. He had his office in Menlo from 1933 to 1936, and since that time has worked in partnership with **Dr. K. M. Chapler,** at Dexter.

Dr. Arnold Reeve, of the State Department of Health's Division of Infectious Diseases, discussed the venereal disease problem with the Clinton City Council and **Dr. A. R. Jensen,** the city health officer there, on July 8. There was an extraordinary reason for the conference, in that the numbers of reported cases in Clinton County had risen spectacularly:

	Syphilis	Gonorrhea
1963	7	3
1965	12	14
1966	36	43
1967	38	192
1968 (first four months only)	16	110

Dr. Jensen said he thought some of the increase could be attributed to "over-caution and over-treating" when the patients have been Job Corps girls. In his opinion, he said, not all cases had been diagnosed correctly. In answer to a question asked by one of the councilmen, Dr. Reeve said that with an input of 1,800 to 2,200 girls per year at the Job Corps center, the reported rate of infection is not necessarily alarming.

Mr. William H. McConnell, a safety engineer with the Institute of Agricultural Medicine at the U. of I. College of Medicine, has been elected chairman of the Agricultural Safety Committee of the American Society of Agricultural Engineers. The Committee is composed of representatives of industry, universities and government, and it develops programs for seminars and initiates recommendations about safety features for agricultural machinery. The ASAE has 6,000 members.

Dr. Don E. Boyle has joined **Drs. Carl A. Jacobs** and **Philip J. Monig** in the practice of general surgery at the Plaza Professional Center, 2916 Hamilton Boulevard, Sioux City. Dr. Boyle is a 1963 graduate of the U. of I. College of Medicine, he interned at Alameda County Hospital, in Oakland, California, and then took his surgery residency at University Hospitals in Iowa City between 1964 and 1968. He and Mrs. Boyle have a five-year-old son, and daughters who are one and two years of age.

On Monday and Tuesday, November 4 and 5, the U. of I. College of Medicine will present a medicine-and-religion program as one of its 1968-1969 series of postgraduate conferences. The overall topic will be "Handling the Stresses of Life," and the out-of-state speakers will be **Victor Szyrynski, M.D., Ph.D.,** professor of psychiatry at the University of Ottawa, and **O. Hobart Mowrer, Ph.D.,** research professor of psychology at the University of Illinois. Dr. Mowrer has recently been studying the efficacy of group therapy for drug addicts. One of the Iowa participants will be **Rev. David Belgum,** an associate professor of religion who is in charge of the program in clinical pastoral education at the University of Iowa, and who is the author of a book entitled MEDICINE AND RELIGION which has just been published by the Iowa State University Press, Ames. **Dr. Paul Ferguson,** of Lake City, chairman of the IMS Committee on Medicine and Religion, will provide further information about the conference as the plans for it are completed.

Deaths

Dr. M. W. Grubb, 83, of Galva, died Sunday, June 9, in a Cherokee hospital after a long illness. A 1912 graduate of the University of Illinois Medical School, Dr. Grubb began practice in Galva in 1913 and retired in 1966.

Dr. John W. LaMar, 39, who had engaged in general practice in Des Moines for eight years, was killed, together with Mrs. LaMar and four of their five children, in an automobile accident near Freeport, Illinois, on June 21. Dr. LaMar was a 1956 graduate of the U. of I. College of Medicine, and he spent some time in Turkey as a physician in the U. S. Armed Forces before coming to Des Moines.

Dr. Robert L. Parker, 92, who practiced general medicine in Des Moines for 56 years, until his retirement in 1962, died at Iowa Lutheran Hospital on June 20. Eleven months previously, he had incurred a hip fracture and subsequently had been unable to walk. He was a 1906 graduate of the Drake College of Medicine, and for about 15 years he served as secretary of the Iowa Medical Society. He was president of the Society in 1947, and was the recipient of its Merit Award in 1956.

Dr. Howard F. Turner, 84, died suddenly at Montgomery County Hospital, in Conroe, Texas, on June 26. He practiced at Marshalltown for five years in the late 1930's and subsequently practiced in St. Louis until the early 1960's.

On the New Iowa Law Regarding Prescriptions

A Pharmacist Comments

CHARLES HUGHES, B.Ph.
Emmetsburg

It would appear that not all of the pharmacists of Iowa are pleased about the change in Iowa law that limits the life of a prescription to 12 months or 11 authorized refills, whichever comes first.

Apparently there are those among our ranks who look upon this as an encroachment upon the professional discretion of a pharmacist. But is it?

All of us will agree that only the physician is qualified to examine the patient, make a diagnosis, decide on a course of treatment and prescribe what medication he deems necessary and advisable. Both federal and state laws are very specific in this regard. These same statutes are equally specific in stating that only the prescribing physician is qualified to decide how long treatment should be continued, including the decision as to whether or when a prescription should be refilled.

The new law does not in any way upset these prerogatives. It does say that the prescribing physician may not authorize refills for a period longer than one year. If a patient, even on maintenance therapy, has not seen his physician within a year, it would seem to be high time that he did so. Perhaps the greatest service you can render to this patient is to point out to him the importance of periodic checkups.

In reality, this law does not limit the rights of the pharmacist to any degree at all. He never did have a right to refill a prescription without the express approval of the prescriber, nor did he have any right to refill those prescriptions which bore a notation "Refill prn."

The pharmacist did have the right in the past to refill the prescription that said "Refill 100 times," or "Refill for four years." In reality he still has that right, but at the end of 12 months (or after 11 refills) he must make a call to the physician to find out whether that is still his wish. If so, he should make out a new prescription, noting the circumstances, and continue to serve his patient.

It has been our experience that most physicians appreciate these calls, and we find that frequently they tell us, "Refill it this time, but tell Mr..... to come in for a check-up before it is filled next time."

This is good and prudent practice both for the physician and for the pharmacist. It is interesting in this regard that as far as we know not one physician has objected to this change in the law.

It is intended primarily to improve the rapport between physician and pharmacist to the end that both can provide better health care to the patient. If it helps to achieve these ends, it is worthwhile legislation.

A Physician Comments

JOHN G. THOMSEN, M.D.
Des Moines

Recent changes in the Iowa law limiting the number of refills of a prescription to 11 or limiting refills to a one-year period, whichever expires first, should not, if the intent is understood, be of concern to either physicians or pharmacists. The change is really only a clarification of the prescription, which is the communication between physician and pharmacist.

To begin with, each may have the feeling that his prerogative is somehow being restricted. This is not so, as a closer look will show. First, the physician is not limited in the amount of medication which he may request on the initial prescription; it is only the maximum number of refills which the law specifies. Next the limitation of refills to a one-year period is simply an assurance that the communication between the physician and the pharmacist remains reasonably current, that it will be brought up to date periodically and that it will be modified as circumstances require. This, it seems to me, is in the best interests of all concerned: the pharmacist, the physician and, most important, the patient.

If we are to act in the best interests of our patients, physicians and pharmacists will cooperate in the matter of the occasional phone call which is required. The physician, in a brief glance at his patient's record, may determine that the patient has a chronic disorder for which further refills are justified. Or he may be reminded that a patient whom he has not seen for a long time is again or still having trouble, and that perhaps he should be reexamined or reevaluated. Other questions may come to mind: "Does the patient have a recurrence of the original condition, or does he have a different disorder—something for which the medication requested may not be indicated?" "Should he be asked to call or to see the physician again?" Rarely one may wonder whether the refill is being requested for the patient to whom the prescription was issued, or for someone else in the family or even for a neighbor or friend.

Whatever the decision—and I think this is important—the physician must depend upon the tact and diplomacy of the pharmacist to present it to the patient in such a way that he will not feel antagonism toward either the pharmacist or the physician. In other words, the patient must be assured that the decision, whatever it may be, has been made in his best interest.

I believe that we, as physicians and pharmacists, are concerned for what is best for our patient. The new changes in the law will help us to meet our responsibility to him.

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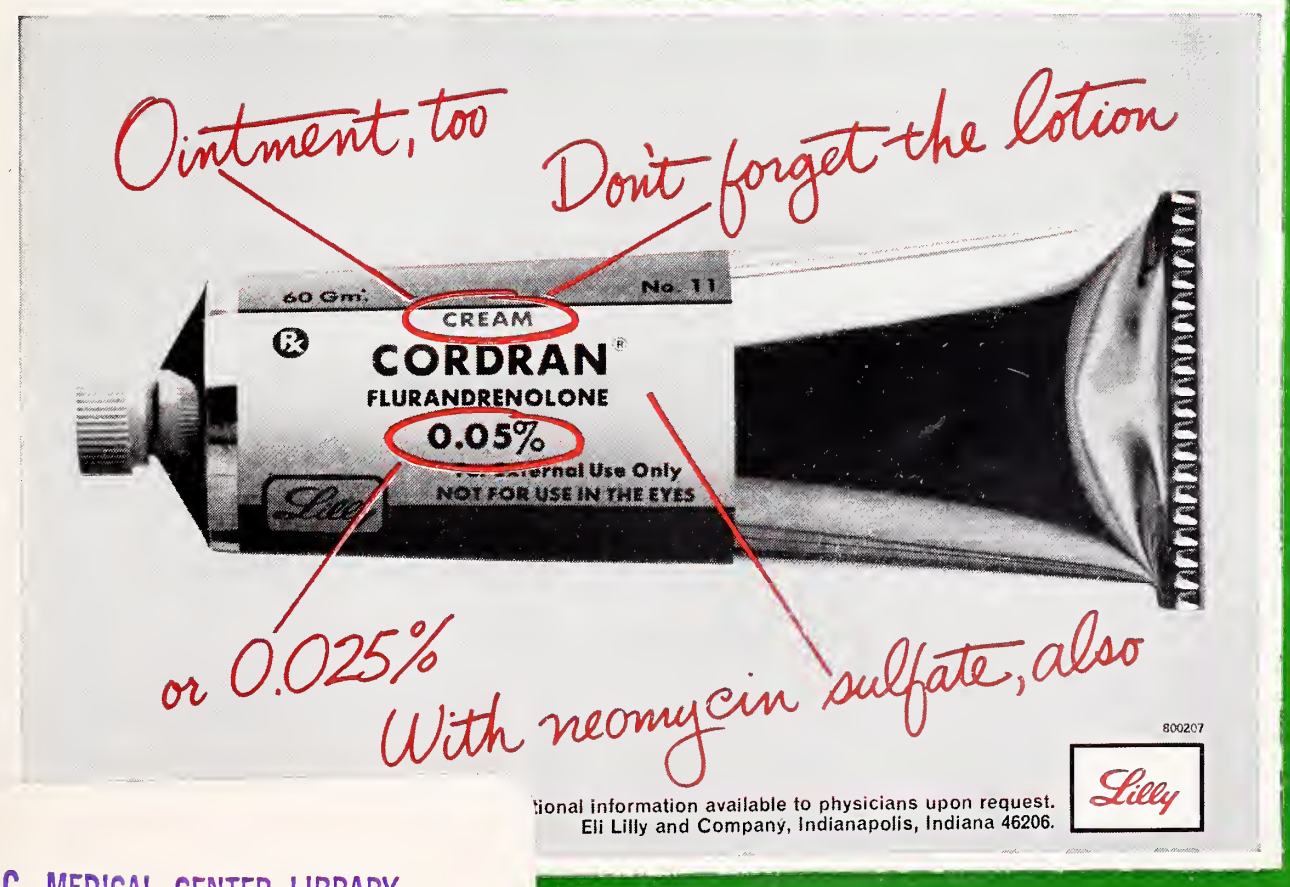
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IN THIS ISSUE:

- Mediastinoscopy—Harry Siderys, M.D., and John N. Pittman, M.D., Indianapolis
- Immunoglobulins and Disease—Hal B. Richerson, M.D., Iowa City
- Therapeutic and Cosmetic Indications for Flush-Fitting Scleral Contact Lenses—Jay H. Krachmer, M.D., Iowa City
- Morning Glory Seed Intoxication: A Case Report—Francis J. Whelan, M.D., F. William Bennett, M.D., and William S. Moeller, M.D., Iowa City
- Mercy Hospital, Des Moines, Clinicopathologic Conference—Fatal Aplastic Anemia Following Viral Hepatitis



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The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVIII September, 1968 No. 9

CONTENTS

SCIENTIFIC ARTICLES

Mediastinoscopy
Harry Siderys, M.D., and John N. Pittman, M.D., Indianapolis 931

Immunoglobulins and Disease
Hal B. Richerson, M.D., Iowa City 935

The Therapeutic and Cosmetic Indications for Flush-Fitting Scleral Contact Lenses
Jay H. Krachmer, M.D., Iowa City 944

Morning Glory Seed Intoxication: A Case Report
Francis J. Whelan, M.D., F. William Bennett, M.D., and William S. Moeller, M.D., Iowa City 946

Mercy Hospital, Des Moines, Clinicopathologic Conference (Fatal Aplastic Anemia Following Viral Hepatitis) 948

EDITORIALS

The Motivation of the College Student Drug-Takers 955

Experience With Live-Virus Mumps Vaccine . . 955

Suprapubic Aspiration of the Bladder in Pregnancy 957

Surgical Treatment of Abdominal Aortic Aneurysm 959

Tell It Like It Really Is! 961

SPECIAL DEPARTMENTS

Coming Meetings 915
The Month in Washington 918
In the Public Interest facing page 954D
Iowa Chapter of the American Academy of General Practice 969
Iowa Association of Medical Assistants 970
President's Page 974
Information From the Iowa Heart Association —Emergency Treatment of Acute Pulmonary Edema 975
The Doctor's Business 977
State Department of Health 978
Woman's Auxiliary News 980
Personals 983
Deaths 994

MISCELLANEOUS

Iowa Doctors Asked to Help in National Study of Maternity Care 943
Further Recommendations for Automobile Safety Design 934
AMA Posture on Public Comment 963
Medical Aspects of Project Head Start in Iowa . 964
Report of Iowa Blue Shield Annual Meeting . . 965
Artificial Lung for the Newborn 968
U. of I. Program in Stroke Management . . . 994

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COMING MEETINGS

IN STATE

Sept. 11 — **Meeting of Iowa Chapter of American Academy of Pediatrics, University of Iowa College of Medicine,** Iowa City.

Sept. 11-12 — **Postgraduate Course in Pediatrics, University of Iowa College of Medicine,** Iowa City.

Sept. 20-21 — **Postgraduate Course in General Practice, University of Iowa College of Medicine,** Iowa City.

Sept. 28 — **15th Annual Internal Medicine Symposium,** Ralph L. Jester Auditorium, Iowa Methodist Hospital, Des Moines.

Oct. 3-5 — **Postgraduate Course on Strokes, University of Iowa College of Medicine,** Iowa City.

Oct. 4-5 — **Iowa Urological Society Meeting,** Iowa City.

Oct. 4-5 — **Postgraduate Course in Urology, University of Iowa College of Medicine,** Iowa City.

Oct. 11-12 — **Postgraduate Course in Otolaryngology for General Practitioners, University of Iowa College of Medicine,** Iowa City, Iowa.

Oct. 21-22 — **20th Annual Meeting and Scientific Assembly, Iowa Chapter of the American Academy of General Practice,** Hotel Savery, Des Moines.

Oct. 26-27 — **Postgraduate Course in Radiology, University of Iowa College of Medicine,** Iowa City.

CONTINENTAL U. S.

Sept. 5-7 — **American Association of Obstetricians and Gynecologists,** Homestead, Hot Springs.

Sept. 13-14 — **American College of Physicians, Wisconsin Regional Meeting,** University Hospitals, Madison.

Sept. 13-20 — **American Academy of General Practice,** Las Vegas.

Sept. 14-15 — **Annual Fall Meeting, Wisconsin Society of Anesthesiologists,** Lake Geneva, Wisconsin.

Sept. 18-20 — **Sixth National Cancer Conference,** Denver Hilton Hotel, Denver.

Sept. 22-25 — **Annual Meeting of Washington State Medical Association,** Olympic Hotel, Seattle.

Sept. 22-27 — **Michigan State Medical Society,** Sheraton-Cadillac Hotel, Detroit.

Sept. 23-28 — **American Fracture Association,** Hotel America, Houston.

Sept. 24-27 — **Kentucky Medical Association,** New Convention Center, Louisville, Kentucky.

Sept. 26-29 — **Metabolic Basis of Heart Disease, Wayne State University School of Medicine,** Detroit.

Sept. 27 — **Great Plains Heart Association Symposium,** Sheraton Ritz, Minneapolis.

Sept. 30-Oct. 1 — **28th Annual AMA Congress on Occupational Health,** Waldorf-Astoria, New York.

Sept. 30-Oct. 4 — **Hospital Medical Staff Conference,** YMCA Conference Center, Estes Park, Colorado.

Oct. 4-8 — **Tenth International Congress on Diseases of Chest sponsored by Council on International Affairs of the American College of Chest Physicians,** Washington-Hilton, Washington, D. C.

Oct. 5-6 — **AMA National Congress on Medical Ethics (Second),** Drake Hotel, Chicago.

Oct. 7-9 — **Kansas City Southwest Clinical Society,** Hotel Muehlebach, Kansas City, Missouri.

Oct. 7-11 — **Basic Mechanisms in Internal Medicine, Medical College of Virginia,** Richmond.

Oct. 7-11 — **Postgraduate Course in High Risk Infant Care sponsored by University of Colorado School of Medicine,** Denver.

Oct. 7-11 — **Computers in Medicine,** University of Wisconsin Medical Center, Madison.

Oct. 7-12 — **Pennsylvania Medical Society,** Penn-Sheraton Hotel, Pittsburgh.

Oct. 9-11 — **15th Western Cardiac Conference,** University of Colorado Medical Center, Denver.

Oct. 11-13 — **Midwest Forum on Allergy,** Continental Plaza, Chicago.

Oct. 14-17 — **Indiana State Medical Association,** Indiana Convention Center, Fort Wayne.

Oct. 14-18 — **American College of Surgeons, Annual Meeting,** Dennis Hotel, Atlantic City.

Oct. 18 — **Surgical Management of Chronic Arthritis, (Illinois Chapter, Arthritis Foundation), Sherman House Hotel,** Chicago.

Oct. 19-24 — **Annual Session, American Society of Anesthesiologists,** Washington-Hilton, Washington, D. C.

Oct. 20-21 — **37th Annual Meeting of American Academy of American Academy of Pediatrics,** Palmer House, Chicago.

Oct. 20-23 — **11th Annual Meeting of American Association of Poison Control Centers,** Palmer House, Chicago.

Oct. 19-23 — **Association of Military Surgeons in the United States,** Sheraton-Park Hotel, Washington, D. C.

Oct. 21-25 — **Postgraduate Medical Course in Care of Spinal Cord Injury Patients sponsored by Veterans Administration Center,** West Roxbury, Mass.

Oct. 21-25 — **Current Concepts of Neurology—Diagnosis and Treatment, University of Maryland School of Medicine,** Baltimore.

Oct. 26-30 — **Thirty-Sixth Postgraduate Assembly, Omaha, Mid-West Clinical Society,** Sheraton-Fontanelle Hotel, Omaha.

Oct. 27-28 — **American Social Health Association Annual Conference,** Hotel Biltmore, New York.

Oct. 27-30 — **American College of Gastroenterology,** Statler-Hilton, Boston.

Oct. 27-Nov. 1 — **American Academy of Ophthalmology and Otolaryngology,** Palmer House, Chicago.

Oct. 28-30 — **Workshop on Respiratory Insufficiency sponsored by University of Colorado School of Medicine,** Denver.

Oct. 28-Nov. 1 — **Rheumatic Diseases: Pathology, Immunology, Diagnosis and Treatment,** Robert B. Brigham Hospital, Boston.

ABROAD

Sept. 9-13 — **4th World Congress of Anaesthesiologists,** London, England.

Sept. 12-15 — **International Society of General Practice, 10th Annual Congress,** Salzburg, Austria.

Sept. 24-28 — **Congress of Neurological Surgeons,** Toronto, Canada.

Sept. 28-Oct. 3 — **Joint Meeting of International College of Surgeon's Two Western Hemisphere Federations,** Honolulu, Hawaii.

Oct. 6 — **Sixteenth Biennial International Congress sponsored by International College of Surgeons,** Tokyo, Japan.

Oct. 8-11 — **5th International Congress of Hygiene and Preventive Medicine,** Rome, Italy.

Oct. 12-20 — **World Psychiatric Association, 1st International Congress,** Milan, Italy.

Oct. 18-20 — **American Association for the Surgery of Trauma,** Montreal, Canada.

Nov. 5-8 — **Eighth Clinical Congress of Israel Surgical Society,** Jerusalem.



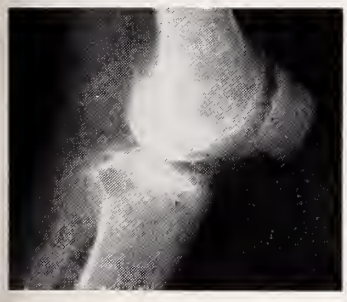
Tandearil® in Osteoarthritis
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.
Warning: Tandearil is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.
Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.
Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reacti-

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But for many aspirin-stubborn osteoarthritics, let Tandearil ease the unwelcome pain breaks of osteoarthritis.

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ate a latent peptic ulcer. The patient should e instructed to take doses immediately after eals or with milk to minimize gastric upset. rug rash occasionally occurs. If it does, romptly discontinue the drug. Agranulocy-osis, exfoliative dermatitis, Stevens-Johnson yndrome, Lyell's syndrome (toxic necrotiz-ig epidermolysis) or a generalized allergic eaction similar to a serum sickness syn-rome may occur and require permanent ithdrawal of medication. Agranulocytosis an occur suddenly in spite of regular, re-eated normal white counts. Stomatitis, sali-ary gland enlargement, vomiting, vertigo and anguor may occur. Leukemia and leukemoid eactions have been reported. While not defi-itely attributable to the drug, a causal rela-onship cannot be excluded. Thrombocyto-penic purpura and aplastic anemia may occur. Confusional states, agitation, head-ache, blurred vision, optic neuritis and tran-sient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hyper-sensitivity, angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

For complete details, please see full Prescribing Information.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily. In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and other factors influencing drug response. Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

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The Month in Washington



Washington, D. C.—"Improving the quality of life in this country requires that far greater national effort be devoted to reducing the incidence of preventable diseases, accidents and premature death." This was the theme of a proposal to President Johnson to establish a Commission on Disease Prevention and Health Protection, appointed by the President, and to require that it make recommendations within a year.

The President was told, "To continue the present national emphasis upon treatment and after-the-fact remedies, as opposed to prevention, must be regarded as a failure of the health professions to adequately protect the public."

The plan's sponsors, headed by Sen. Warren Magnuson (D., Wash.), chairman of the Senate Commerce Committee, declared:

"Many of the diseases currently prevalent can be prevented entirely. Others can be detected and cured in the early stages. In some cases, it is simply a question of instilling awareness, recognizing symptoms or the importance of diet, and exercise. Technical personnel and automated laboratory and computerized recording procedures can utilize known techniques to operate comprehensive screening programs. These prevention and early detection programs can save money and conserve scarce physician time. People can be educated to expect health rather than to tolerate illness, to demand prevention rather than to admire belated treatment."

The statement continued: "Benefits can be derived through legislation. Others will accrue through public and professional education. Still further benefits would come from financial support for special professional and non-professional training in the practice of preventive medicine. The following are just a few examples of things that can be done now. For example, we now have the authority to clean the polluted air over most of the major urban areas of this country.

"Other approaches include new methods of paying for and organizing health services. We, at present invest huge sums in medical care, through public and private support. The same means of coverage, however, such as Title XVIII, do not provide for 'health protection'; there is no payment for periodic health appraisal on an out-of-hospital basis, with provision for follow-up care. This should include individual and group counseling services necessary for health maintenance, given by a physician or other health professional."

The Magnuson group said, "Despite the convincing case for prevention, about two-thirds of all medical schools do not have departments of preventive medicine. This lack is appalling. We should at once encourage the establishment, or strengthening, of these departments in all medical schools, and emphasize a more realistic training program for the physicians of tomorrow."

* * *

The 1968 supplemental report on smoking and health of the Surgeon General of the Public Health Service reaffirmed that cigarette smoking is a health hazard.

The report was sent to Congress the same day as a Federal Trade Commission recommendation that cigarette advertising be banned from television and radio.

Highlights of the smoking report were:

—New evidence indicating that the life expectancy among young men is reduced by an average of eight years in "heavy" cigarette smokers (those smoking over two packs a day), and an average of four years in "light" cigarette smokers (those smoking less than one-half pack per day).

—Cigarette smoking can contribute to the development of cardiovascular disease, and particularly to death from coronary heart disease. Some of the harmful cardiovascular effects appear to be reversible after cessation of cigarette smoking.

—New evidence that the previous finding that cigarette smoking is the most important cause of chronic bronchopulmonary disease in the United States.

—Additional evidence that cigarette smoking is

(Continued on page 921)

But please don't forget this:

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of the alka formulation are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patient should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately before or after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to serum sickness may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.



Dosage in Painful Shoulder: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily.

In selecting the appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response. (B)R 46-070-A

For complete details,
please see full prescribing information.

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100 mg. phenylbutazone
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1.25 mg. homatropine methylbromide



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This penicillin produces high, fast levels—orally.

Pen•Vee® K is usually so rapidly and completely absorbed that therapeutic penicillin levels are attained within 15 to 30 minutes. Thus it can often obviate the need for penicillin injections. The higher serum levels produced generally last longer than with those of oral penicillin G.

Indications: Infections susceptible to oral penicillin G: prophylaxis and treatment of streptococcal infections; treatment of pneumococcal, gonococcal, and susceptible staphylococcal infections; prophylaxis of rheumatic fever in patients with a previous history of the disease.
Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

Wyeth Laboratories Philadelphia, Pa.

ORAL PEN•VEE® K

(potassium phenoxymethyl penicillin) Wyeth

The Month in Washington

(Continued from page 918)

a main cause of lung cancer in men and is causally related to lung cancer in women.

* * *

Dr. Robert Q. Marston was appointed to succeed Dr. James A. Shannon as director of the National Institutes of Health, effective Sept. 1.

Dr. Marston, 45, had been administrator of the NIH's Health Services and Mental Health Administration since April 1. He went with the NIH in 1966 as the first administrator of the Heart Disease, Cancer and Stroke Regional Medical Programs. Before that he had been vice-chancellor and dean of the University of Mississippi Medical School.

In accepting his new post, Dr. Marston listed knowledge first and then money and manpower as the key factors in future improvements in the health of Americans. "The ultimate constraint of our ability to effect the health of the people is neither dollars nor manpower, but the knowledge gained through research," he said.

"A major problem of the future will be to insure institutional stability, during times of manpower and fiscal shortages on which future (medical research) success is dependent."

In appointing Dr. Marston, President Johnson said the new NIH director faces a "staggering job" because not only the United States, but the entire world needs "rescue from death and disability that medical research promises."

Mr. Johnson expressed the hope that Dr. Marston's leadership in research would play an important role in an effort to reduce the death rate from serious diseases by 10 per cent by 1976.

* * *

The John E. Fogarty International Center for Advanced Study in the Health Sciences has been established in memory of the late Rhode Island congressman who was a leader in health legislation for many years. Congress provided an initial appropriation of $500,000 for the new center to start operation in the National Institutes of Health until its own building is completed. The Center's first director is Dr. Milo D. Leavitt, Jr., who had been director of the NIH Office of Program Planning.

* * *

U. S. Attorney General Ramsey Clark appealed for broad support and cooperation of the public in enforcement of the laws against marijuana and LSD. Otherwise, he said, the law cannot be enforced effectively. "Enforcement must be accompanied by research and education," he said. "The youth of today are extremely sophisticated about drugs, and they are also highly selective of the wave lengths they tune in on—the channels of information they select."

(Continued on page 928)

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"Now that your acne is clearing up nicely, it might be a good idea if you started losing some weight."

Get them while they're easily reversible.

Obesity doesn't happen suddenly. This insidious process has its beginning—and the chances of reversing it are better—during the *first 10 to 15 pounds of weight gain.* When a new dietary pattern must be established, consider the adjunctive use of BAMADEX SEQUELS. Combining the proven *anorexigenic* action of d-amphetamine with the *tranquilizing* effect of meprobamate, BAMADEX SEQUELS controls appetite throughout the day, usually with a single capsule daily.

Contraindications: Dextro-amphetamine sulfate: In hyperexcitability and in agitated prepsychotic states. Previous allergic or idiosyncratic reactions to meprobamate.
Precautions: Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or are severely hypertensive.

Dextro-amphetamine sulfate: Excessive use by unstable individuals may result in psychological dependence.

Meprobamate: Careful supervision of dose and amounts prescribed is advised, especially for patients with known propensity for taking excessive quantities of drugs. Excessive and prolonged use in susceptible persons, e.g. alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, reduce dosage gradually. Sudden withdrawal may precipitate recurrence of preexisting symptoms such as anxiety, anorexia, or insomnia; or withdrawal reactions such as vomiting, ataxia, tremors, muscle twitching and, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, reduce dosage and avoid operation of motor vehicles, machinery or other activity requiring alertness. Effects of excessive alcohol consumption may be increased by meprobamate. Appropriate caution is recommended with patients prone to excessive drinking. In patients prone to both petit and grand mal epilepsy meprobamate may precipitate grand mal attacks. Prescribe cautiously and in small quantities to patients with suicidal tendencies.
Side Effects: Overstimulation of the central nervous system, jitteriness and insomnia or drowsiness. Dextro-amphetamine sulfate: Insomnia, excitability, and increased motor activity are common and ordinarily mild side effects. Confusion, anxiety, aggressiveness, increased libido, and hallucinations have also been observed, especially in mentally ill patients. Rebound fatigue and depression may follow central stimulation. Other effects may include dry mouth, anorexia, nausea, vomiting, diarrhea, and increased cardiovascular reactivity.

Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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Private Practice Physicians tried Magan on almost 700 patients whom they judged intolerant to aspirin and other salicylates.

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(magnesium salicylate, W-T)

May be tolerated by some persons intolerant to aspirin by reason of gastrointestinal irritation.

Magan is a new salicylate product from Warren-Teed.

A single chemical entity . . . no coating, no buffering, sodium free and non-acetylated.

Composition: Each orange colored tablet contains 5 grains (approx. 325 mg) of magnesium salicylate.

Dosage: 1 or 2 tablets every 4 hours with a full glass of water.



When it's time for Thorazine® brand of chlorpromazine



...can you depend on less?

For profound calming effect in moderate to severe mental and emotional disturbances of everyday practice.

Before prescribing, see complete information, including adverse effects reported with phenothiazines and symptoms and treatment of overdosage, in SK&F literature or *PDR*. The following is a brief precautionary statement.

Contraindications: Comatose states or the presence of large amounts of C.N.S. depressants.

Precautions: Potentiation of C.N.S. depressants may occur (reduce dosage of such agents when used concomitantly). Use with caution in patients with chronic respiratory disorders. Antiemetic effect may mask overdosage of toxic drugs or obscure other conditions. Administer in pregnancy only when necessary. Because of possible drowsiness use cautiously and warn patients who operate vehicles or machinery.

Adverse Reactions: Drowsiness; dry mouth; nasal congestion; constipation; amenorrhea; miosis; mild fever; weight gain; hypotensive effects, sometimes severe with I.M. administration; epinephrine effects may be reversed; dermatological reactions; parkinsonism-like symptoms on high dosages (in rare instances, may persist); lactation and moderate breast engorgement (in females on high dosages); and less frequently, cholestatic jaundice (use cautiously in patients with liver disease). Adverse reactions occurring rarely, include: mydriasis; agranulocytosis; skin pigmentation; epithelial keratopathy; lenticular and corneal deposits (after prolonged substantial doses).

Available: Tablets, 10 mg., 25 mg., 50 mg., 100 mg. and 200 mg.; Spansule® capsules, 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg.; Injection, 25 mg./cc.; Syrup, 10 mg./5 cc.; Suppositories, 25 mg. and 100 mg.

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METHYCLOTHIAZIDE

Each tablet contains
Methyclothiazide 5 mg. with
Deserpidine 0.25 mg. or 0.5 mg.

Indications: Edema and mild to moderate hypertension (Enduron), and mild to moderately severe hypertension (Enduronyl). More potent agents, if added, can be given at reduced dosage.

Contraindications: Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease or impending hepatic coma (hepatic coma due to hypokalemia has been reported in patients on thiazides). Do not use Enduronyl in severe mental depression, suicidal tendencies, active peptic ulcer, or ulcerative colitis.

Warnings: Consider possible sensitivity where there is history of allergy or asthma. If added potassium is indicated, dietary supplementation is recommended. Reserve enteric-coated potassium tablets for cautious use only when necessary, as they may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation often requiring surgery; discontinue them immediately if abdominal pain, distention, nausea, vomiting, or g.i. bleeding occurs. Neither Enduron nor Enduronyl contains added potassium.

Precautions: Use thiazides cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery, thiazides may reduce response to vasopressors, and increase response to tubocurarine. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia) in all patients. In hypokalemia (especially in digitalized patients) give supplemental potassium. In hypochloremic alkalosis, give supplemental chloride.

Use rauwolfias with caution in patients with history of peptic ulcer. Rauwolfias with anesthetics may produce hypotension and bradycardia. Discontinue Enduronyl two weeks before elective surgery. Consider vagal blocking agents during emergency surgery. In epilepsy, adjust anticonvulsant dosage. In electroshock, shorten stimulus strength and duration. In occasional patients with depressive tendencies, rauwolfias may precipitate severe mental depression that usually disappears when drug is stopped.

Adverse Reactions: Thiazide reaction include blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, serum uric acid or blood sugar; anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice, symtomatic gout, and pancreatitis. Cutaneous vasculitis in the elderly has been reported with other thiazides. Adverse effects with deserpidine are qualitatively similar to those with reserpine, but their incidence is lower. These include nasal stuffiness, abdominal cramps or diarrhea, nausea, headache, weight gain, reduced libido and potency, peptic ulcer aggravation, epistaxis, skin eruption, asthma in susceptible patients, electrolyte imbalance, excessive salivation, and a reversible Parkinson's syndrome. Excessive drowsiness, fatigue, weakness, and nightmares may signal mental depression. Thrombocytopenia, purpura, and a symptom manifested by dull sensorium, deafness, uveitis, glaucoma, and optic atrophy are rare allergic reactions to other rauwolfias. Hypotension from antihypertensive agents may precipitate angina attacks in susceptible individuals. Usually adverse reactions disappear when drug is withdrawn.

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Do not use with: centrally or peripherally acting sympathomimetic drugs; foods high in tyramine (e.g., aged and natural cheeses); parenteral reserpine or guanethidine; imipramine, amitriptyline, desipramine, nortriptyline or their analogues; other monoamine oxidase inhibitors; methyldopa or dopamine; separate Eutron and these agents by two weeks.

Sensitivity to thiazides; severe renal disease (except nephrosis) or shutdown; severe hepatic disease; impending hepatic coma from thiazide-induced hypokalemia.

Warnings—Patients: 1. No other drugs (particularly "cold preparations" and antihistamines), cheese or alcohol without physician's consent. 2. Promptly report orthostatic symptoms, severe headache, other unusual symptoms. 3. Angina pectoris or coronary artery disease patients must not increase physical activity with improved anginal symptoms or well-being.

Physicians: 1. Use antihistamines, hypnotics, sedatives, tranquilizers and narcotics (meperidine contraindicated) cautiously in reduced doses. 2. Stop Eutron two or more weeks before elective surgery; in emergency surgery reduce premedication (narcotics, sedatives, analgesics, etc.) to 1/4 to 1/5; carefully adjust anesthetic dosage to patient response. 3. Use cautiously in advanced renal failure. 4. Pargyline may induce hypoglycemia. 5. Consider possible sensitivity reactions when a history of allergy or asthma is present. 6. If potassium is indicated, dietary supplement is recommended; enteric-coated potassium tablets may induce serious or fatal small bowel lesions (stenosis with or without ulceration), cause obstruction, hemorrhage, and perforation frequently requiring surgery; discontinue medication immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs; Eutron does not contain added potassium. 7. Possible systemic lupus erythematosus has been reported for thiazides.

Precautions—Pargyline: Use cautiously at reduced dosage: caffeine, alcohol, antihistamines, barbiturates, chloral hydrate, other hypnotics, sedatives, tranquilizers, narcotics. Periodically do urinalyses, blood counts, liver function tests, etc. Use with caution in liver disease. Watch for orthostatic hypotension, especially in impaired circulation (e.g., angina pectoris, coronary artery disease, cerebral arteriosclerosis); also, augmented hypotension in concomitant febrile illnesses. Reduce or discontinue if hypotension is severe. In impaired renal function watch for cumulative drug effects, elevated BUN and other evidence of progressive renal failure; withdraw drug if these persist. In surgery increased central depressant response (hypotension and increased sedative effect) can be controlled by (1) discontinuing at least two weeks prior; (2) in emergency surgery lowering dose of premedication; (3) when necessary, administering a vasopressor. Do not use in hyperactive and hyperexcitable patients. Pargyline may unmask severe psychotic symptoms where emotional problems pre-exist. Use cautiously in Parkinsonism, especially with antiparkinsonian agents. In prolonged therapy, examine for change in color perception, visual fields, fundi and visual acuity. Also, prolonged therapy has made certain patients refractory to nerve blocking effects of local anesthetics.

Methyclothiazide: Use cautiously in severe renal dysfunction, impaired hepatic function or progressive liver disease; also in pregnancy (bone marrow depression, thrombocytopenia, and altered carbohydrate metabolism have been reported in certain newborn). In surgery thiazide may reduce vasopressor response and increase tubocurarine response. Antihypertensive response may be enhanced following sympathectomy. Watch for electrolyte imbalance (e.g., hyponatremia). Give supplemental chloride if hypochloremic alkalosis occurs and supplemental potassium if hypokalemia occurs (especially in digitalized patients). Thiazides may decrease serum P.B.I. without signs of thyroid disturbance.

Adverse Reactions — Pargyline: Orthostatic hypotension and associated symptoms, mild constipation, fluid retention, edema, dry mouth, sweating, increased appetite, arthralgia, nausea, vomiting, headache, insomnia, difficult in micturition, nightmares, impotence, delayed ejaculation, rash, purpura, weight gain, hyperexcitability, increased neuromuscular activity and other extrapyramidal symptoms. Drug fever is extremely rare. Reduction in blood sugar and hypoglycemic effects are possible. Congestive heart failure has been reported in a few patients with reduced cardiac reserve.

Methyclothiazide: Blood dyscrasias (thrombocytopenia with purpura, agranulocytosis, aplastic anemia); elevation of BUN, blood sugar or serum uric acid (gout may be induced); anorexia, nausea, vomiting, diarrhea, headache, dizziness, paresthesia, weakness, skin rash, photosensitivity, jaundice and pancreatitis. Cutaneous vasculitis in elderly patients has been reported with other thiazides.

If side effects are severe or persist, reduce dosage or withdraw drug. 804438R

ABBOTT

TM-TRADEMARK

The Month in Washington

(Continued from page 921)

President Johnson named a special committee to develop a five-year program for providing more effective birth control. The study committee will be headed by HEW secretary Wilbur J. Cohen. Mrs. John D. Rockefeller, III, of New York City, will serve as his co-chairman. An official said one matter to be studied will be the fact that present methods of contraception are not adequate. He said that the so-called "pill" is too expensive for widespread use in some areas, and that it is difficult to educate illiterate people in its use.

* * *

The National Institutes of Health has asked processors of whole pooled human blood plasma to halt its interstate shipment because the substance has been causing hepatitis in one out of 10 patients receiving transfusions. The move is expected to halt use of most such plasma, of which about 300,000 pints has been given annually to about 100,000 patients in the United States. The agency acted on a report issued in April by the National Research Council saying use of whole pooled plasma should be discouraged and even discontinued because of the hepatitis danger.

The Senate Health Subcommittee was told that the nation talks more and does less about its 5 million alcoholics than about any of its other health problems. Michael Gorman, a spokesman for the National Council on Alcoholism, said that the losses from alcoholism are now running about $2 billion a year. Dr. Philip R. Lee, Health, Education and Welfare Assistant Secretary, supported Mr. Gorman. According to Dr. Lee, alcoholism is an "enormous economic liability to the nation" in terms of job absenteeism, lowered productivity, and medical insurance expense.

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1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



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Scientific Articles

Mediastinoscopy

HARRY SIDERYS, M.D., and
JOHN N. PITTMAN, M.D.
Indianapolis, Indiana

The great importance of being able to evaluate pulmonary diseases by biopsy of the lymph nodes that drain the lungs has been appreciated for a long time. It has been recognized that such a tool would be useful not only for evaluation of patients with carcinoma but also of many with non-malignant diseases. Daniels,[1] in 1949, described the scalene fat pad or scalene node biopsy, which subsequently became a standard method for attempting to biopsy nodes that drain pulmonary tissue. Through the years, that approach has met only limited success, largely because the scalene nodes are not the primary drainage site for pulmonary tissue. Pulmonary-tissue lymphatics drain primarily to the hilar nodes and mediastinal nodes. Only later does drainage occasionally go to the nodes in the supraclavicular area. Evidence in support of this is the observation that supraclavicular nodes do not ordinarily contain anthracotic pigment, whereas the nodes in the hilar area do contain anthracotic pigment.

Further attempts to biopsy nodes as a means of evaluating pulmonary diseases occurred in the mid-fifties when Harken[2] attempted to enter the mediastinum from the supraclavicular space, first digitally and then using a mediastinoscope of his own. That approach, however, has proved so hazardous that even Dr. Harken has partially given it up. A number of large torn veins, punctured thoracic ducts and other mishaps caused abandonment of that technic.

A report was published in 1959 about a new technic developed by Dr. Carlens.[3] His work provided the foundation for the technic of mediastinoscopy that has been employed extensively in Europe and is beginning to be used in this country. The technic has been used in thousands of patients on the European continent, and it has been in use in this country for relatively few years.

TECHNIC

The patient is anesthetized, intubated and placed in reverse Trendelenberg position with the neck extended. A transverse incision about 3 cm. long is made just above the suprasternal notch and is carried down to the trachea. If scalene fat pad exploration or excision is to be done simultaneously, a thyroid incision is used. The pretracheal fascia is incised, and using blunt finger dissection, the fascia is elevated from the trachea down to the carina (Figure 1). Using the left index finger one can readily identify the aortic arch, the innominate and left carotid arteries, the carina and the anterior as-

* The authors are staff members in the Department of Thoracic & Cardiovascular Surgery at Methodist Hospital Graduate Center, 1604 N. Capitol Avenue, Indianapolis, Indiana 46202. Dr. Siderys made this presentation at the 1967 Mercy Hospital Medical Day, in Des Moines.

pect of the right and left main-stem bronchi. Lymph nodes can be identified and partially dissected free by digital manipulation.

After the mediastinum has been thoroughly explored by the finger, the mediastinoscope is introduced for obtaining a specimen of lymph nodes by means of biopsy or excision under direct vision (Figure 2). Hemostasis is accomplished by temporary packing or cautery. The wound is closed without drainage.

The most surprising anatomical fact that one has to realize when he starts doing these procedures is that the carina at the bifurcation of the trachea is just a few inches beneath the suprasternal notch, particularly in a patient who has his head extended. Thus, the ordinary index finger can reach the carina and feel the widening of the trachea into the right and left main-stem bronchi at that point.

In probing about the trachea with the finger, one very frequently can feel some soft nodes which lie in the paratracheal region. The soft nodes to which I am referring very frequently or ordinarily are normal ones. Abnormal nodes —ones, for example, containing metastatic carcinoma or granulomas, i.e., granulomatous nodes—feel different from the ordinary ones in that they are firm. This characteristic is quite obvious to the dissecting finger. Normal nodes are somewhat difficult to discern. During this part of the procedure one feels for nodes, and if he encounters anything that is firmer or more rubbery than ordinary, he dissects it out with his fingertip during the probing part of the operation.

Biopsy of tissues that have not been dissected free by the index finger is hazardous! On occasion it has been done, and sometimes problems have been associated with such attempts. The vena cava lies alongside the right aspect of the trachea, and ordinarily it can be seen. But a blind biopsy might result in a serious accident. The pulmonary artery lies in the carinal area, and a blind biopsy in that region would likewise be hazardous. And on the left side of the trachea lies the recurrent laryngeal nerve, and biopsying that structure would lead to complications.

OUR EXPERIENCE

Yet the reason for our adopting the procedure is that when we reviewed the literature, particularly that from Europe where over a thousand cases have been analyzed, we learned that the incidences of mortaliy and morbidity had been extremely low. Reynders,[4] in over 250 patients had no significant infections and only one instance of mediastinal hemorrhage requiring thoracotomy for control. In addition, two

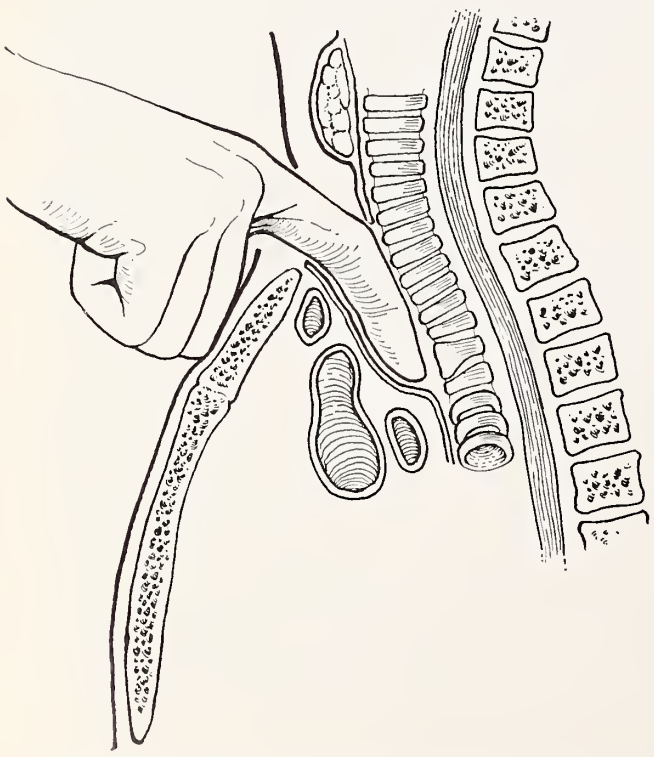


Figure 1. The fascia is elevated from the trachea down to the carina by means of blunt finger dissection.

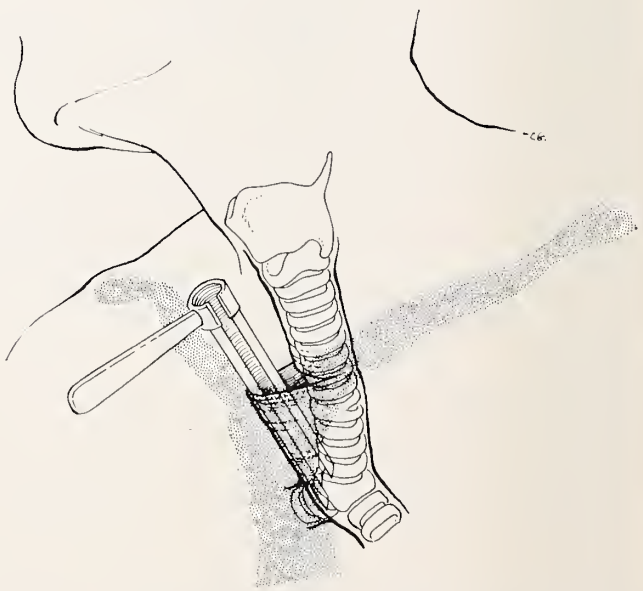


Figure 2. The mediastinoscope is then introduced for the purpose of obtaining a specimen for biopsy or of excising lymph nodes.

patients developed pneumothorax, and three patients had transient left recurrent nerve palsies. Our experience confirms that the risk of mediastinoscopy is minimal when compared with the value of the information obtained. Jepson,[5] in more than 900 cases, observed no instances of major bleeding, only one case of pneumothorax, and one case of paralysis of the left vocal cord. Mediastinitis, which responded to therapy, occurred in one patient in whom a pocket of pus was entered during the course of obtaining a mediastinal node for biopsy. No other morbidity and no mortality occurred in this large experience.

We therefore embarked on a program of investigating the values of this procedure, and when I last reviewed our records, I found that we had performed it on 17 patients. There have been no mortalities, but one patient had a temporary paralysis. That also has been described in the literature as "an uncommon complication." Our patient developed a temporary vocal cord paralysis, but regained function of the vocal cord after three months, which surprised us a great deal. Apparently finger dissection in the vicinity of the recurrent nerve can cause enough blunt trauma to cause poor function of the recurrent pharyngeal nerve on the left side.

Of the 17 patients on whom we have performed mediastinoscopy, 6 patients were found to have benign hilar, or mediastinal adenopathy (in one case due to sarcoidosis), and had no further surgical procedure. In the remaining 11 patients, carcinoma of the lung was eventually proven. Seven of the 11 with carcinoma were found, by mediastinoscopy, to have mediastinal metastases and were judged inoperable. The remaining 4 patients with carcinoma were explored and only 2 were resected with hope for cure.

In our experience, then, 6 patients with benign hilar adenopathy were spared thoracotomy, while 7 of 11 patients with cancer of the lung avoided fruitless thoracotomy. We didn't perform mediastinoscopy on all patients with carcinoma of the lung. Those patients with centrally located lesions or undifferentiated carcinomas, or those who appeared to be poor risks for thoracotomy were, as a rule, subjected to mediastinoscopy. This accounts for the relatively large proportion of our patients who were found to be inoperable or nonresectable.

In patients with carcinoma of the lung, the information obtained by mediastinoscopy is usually quite helpful. Most authors find that one-third of their patients with carcinoma of the lung who are otherwise operable already have mediastinal metastases. Furthermore more than one-third of those patients with mediastinal metastases have contralateral mediastinal metastases. In Boerema's[6] experience, prior to the use of mediastinoscopy, pulmonary resection with a hope for cure occurred in only 60 per cent of thoracotomies. When mediastinoscopy was employed prior to surgery, resection with hope for cure occurred in more than 90 per cent of the cases.

There can be little doubt that the presence of contralateral nodal metastases precludes the use of pulmonary resection as curative treatment for carcinoma of the lung. Mediastinoscopy will save these patients from useless thoracotomy.

The larger group with ipsilateral nodal metastases present a problem in therapy. Lobectomy or pneumonectomy with mediastinal node resection will result in cure in a small number of these patients. The presence of ipsilateral positive nodes is not a contraindication to surgery but it is a preoperative indication of the need for node dissection at the time of surgery. Some physicians advocate preoperative radiation therapy. Knowledge of the degree of involvement of mediastinal nodes in such patients should lead to more informed and intelligent care of patients with carcinoma of the lung. Mediastinoscopy has been particularly informative in the evaluation of patients with hilar adenopathy. The experience of Amer, Minkowitz and Dennis[7] is that this procedure is much more likely to yield diagnostic information than is the scalene node examination alone.

SUMMARY

Mediastinoscopy is a safe way to explore the mediastinum and obtain lymph nodes for biopsy bilaterally from the paratracheal region down to the carina. The information thus obtained is most useful in patients with carcinoma of the lung who are being readied for thoracotomy and in patients with undiagnosed hilar

adenopathy. Seventeen patients were subjected to mediastinoscopy and 13 were spared useless thoracotomy. The only complication was a temporary vocal cord paralysis.

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Further Recommendations for Automobile Safety Design

The front seatbacks in passenger autos should be 28 inches high—several inches higher than they are now—to provide better protection against whiplash and other injuries in rear-end collisions, according to a new study. This prescribed height was arrived at after a series of collision experiments conducted by the Institute of Transportation and Traffic Engineering, University of California at Los Angeles.

The testing of seat designs of all types, including separate head restraints, was part of the extensive study conducted under research grants from the U.S. Public Health Service's Environmental Control Administration, in Cincinnati. The Ford Motor Company furnished new cars for the tests.

The findings also took into consideration the problem of vision both from within the car and for motorists ahead or behind trying to see through the vehicle. On this point the report states that the width of the seatback near the top can be reduced to accommodate increased visibility without significantly reducing the over all protection afforded by a head support.

The report also states that "the head restraint in the front seat unit should be designed as an extension of the seatback, and preferably not as an attachment or an adjustable unit. The entire seat should act as a unit, yielding to impact in the same strength."

Richard E. Marland, Ph.D., Chief of the Public Health Service's Injury Control Program, said that the seatback, including size, angle of recline, and structure, is to auto riders in a rear-end crash what seat belts are in a front-end collision. In regard to the rear seat of an auto, the study found that in a moderately severe, 30 mile per hour collision, a bench seat, modified from 21 inches to 25 inches provided good protection for the average-sized passenger. The passenger's head, tests showed, did not strike the rear window or the area above the window. The rear-window restraining action, however, is not regarded as satisfactory. "Some form of rear-seat seatback restraint for the head is recommended," the report notes, "whether simply as an extension in seatback height or as an extension of padding onto the window ledge behind the passenger."

The study was made by Derwyn M. Severy, Harrison M. Brink, and Jack D. Baird of the UCLA Institute. Other aspects of the rear-end collision problem tested included the performance of the fuel tank under impact, seat structures and anchorages, seatback deflection and permanent deformation, head restraints, lap belts, and padding for passenger protection.

Immunoglobulins and Disease

HAL B. RICHERSON, M.D.
Iowa City

Advances in laboratory methods have led to an increasing understanding of the gamma globulins. These serum proteins were initially defined on the basis of electrophoretic mobility, and it soon became apparent that the gamma globulins were responsible for antibody activity of the serum. The term *immunoglobulin* has been applied to those serum proteins responsible for antibody activity in immunity and hypersensitivity. Ultracentrifugation and immunoelectrophoresis separated classes of antibodies on the basis of molecular weight and antigenic properties. At present five immunoglobulin classes are recognized.

Certain disease states are accompanied by changes in the immunoglobulins which are helpful in diagnosis. Some immunoglobulin abnormalities appear to be intimately involved with primary disease causation, and others are apparently secondary to the disease. Excellent comprehensive reviews of the immunoglobulins are available.[1, 2, 3] It is the purpose of this paper to provide a concise summary of the present knowledge which is useful in a practical approach to patients with immunoglobulin abnormalities.

THE IMMUNOGLOBULINS

Immunoglobulin Structure—The antibody molecule has been studied by splitting it into subunits by enzymatic digestion, reduction and/or acidification and defining these subunits by various chemical, physical and immunologic methods. The basic IgG molecule has been found to consist of four polypeptide chains—two "heavy" chains and two "light" chains joined by disulfide (S-S) bonds. Several models have been proposed and are helpful in visualizing the molecule. An example, modified from Porter's classic model,[4] is shown in Figure 1.

The antibody molecule reacts with its specific antigen at two sites, each site containing portions of both heavy and light chains. The reactive sites involve only a small portion of the antibody molecule. All immunoglobulin molecules probably are similar in basic structure, but may contain more than one such unit.

Light chains are of two antigenic types, termed kappa (κ) and lambda (λ). All classes of immunoglobulins have identical light chains, approximately two-thirds of the molecules of any single class having the kappa type and one-third having the lambda type of light chains. *Heavy chains*, on the other hand, are different structurally and antigenically for each class. The structural variations are responsible for functional differences among the various classes including such properties as complement fixation, skin sensitization and passage through the placenta.

Classification of Immunoglobulins—There are five recognized classes of immunoglobulins. Classification is based primarily on antigenic uniqueness of the heavy chains reflecting structural and functional differences among the classes. The main characteristics of the five classes (where known) are summarized in Table 1. IgG is the only immunoglobulin known to pass the placenta. The normal range for immunoglobulins in serum is rather wide, and the values listed are approximate averages.

Function of the Immunoglobulins—All of the immunoglobulins normally function as antibodies. In certain diseases such as multiple

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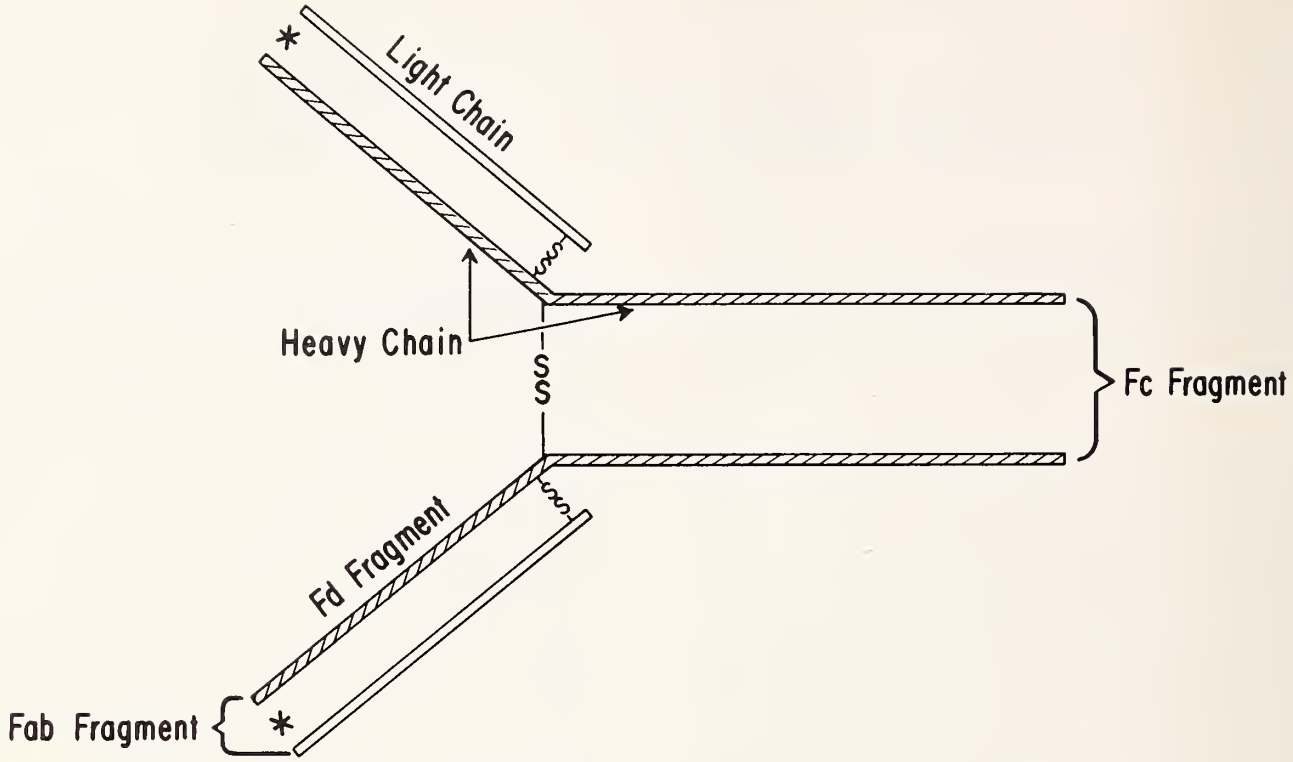


Figure 1. Diagrammatic model of IgG molecule. Asterisks (*) mark areas where the antibody binds antigen. The molecule consists of 2 heavy chains and 2 light chains joined by disulfide bonds (S-S). Papain splits molecule near the heavy chain "joint" into Fab fragments and an Fc fragment. A Fab fragment consists of 1 light chain and a portion of a heavy chain termed the Fd fragment. Other immunoglobulin classes presumably have a similar basic molecular structure, but may consist of several such units (1 to 3 for IgA, 5 for IgM).

Table 1.

CLASS	IgG	IgA	IgM	IgD	IgE
Sedimentation Coefficient	7S	7 to 13S	19S	?	?
Molecular Weight	160,000	160,000+	1,000,000	?	?
Carbohydrate Content	2.6%	7.0%	10.5%	?	?
Placental Transfer	Yes	No	No	No	No
Function	1° and 2nd° immune response; major anti-bact., viral, toxin antibodies.	External secr.; isohemagglutinins.	1° immune resp.; anti-lipopolysaccharides; rheumatoid factor, heterophile, cold agglutinins.	?	Atopic reagin
Heavy Chains	γ	α	μ	δ	ϵ
Light Chains	κ or λ	κ or λ	κ or λ	κ or λ	κ or λ
Molecular Structure	$\gamma_2 \kappa_2$ or $\gamma_2 \lambda_2$	$(\alpha \kappa)_{2\ 2\ 1\text{ to }3}$ or $(\alpha \lambda)_{2\ 2\ 1\text{ to }3}$	$(\mu \kappa)_{2\ 2\ 5}$ or $(\mu \lambda)_{2\ 2\ 5}$	$\delta \kappa$ or $\delta \lambda$ $_{2\ 2\ \ 2\ 2}$	$\epsilon \kappa$ or $\epsilon \lambda$ $_{2\ 2\ \ 2\ 2}$
Normal Values in Adult Serum (mg%)	1,200	150	100	3	Trace

myeloma, the antigen (if there is one) is unknown. Presumably, each class has unique functional characteristics.

IgG molecules form the bulk of serum antibodies. Specific antibodies formed against most antigens consist predominately of IgG after the very early phases of antibody formation. About 80 per cent of serum antibody activity against bacteria, viruses and toxins resides in the IgG class.

IgA molecules are dominant in external secretions such as saliva, sputum, gastrointestinal mucus, nasal secretion and tears. The functional role in these locations is not well known, but presumably the "secretory" IgA plays a role in the body's defenses.[5, 6] Secretory IgA contains an additional piece (termed a transport piece) that results in a larger complex, with a sedimentation coefficient of 11S. The IgA-transport piece complex is apparently formed and secreted locally from cells present in the respiratory tissues. The relationship to serum IgA is uncertain. Serum IgA makes up some of the isohemagglutinins reflecting blood type, and instances of other antibody specificity have been reported, including antibrucella and antiinsulin antibodies.

IgM antibodies appear earliest in primary immunization, and frequently fail to reappear with booster antigen. IgM molecules are very potent and efficient antibodies, and IgM is the only class found in primitive animals such as the shark. Rheumatoid factors and cold agglutinins are usually of the IgM class, as are most serum antibodies against various lipopolysaccharide antigens.

IgD immunoglobulins have no known functional role.

IgE immunoglobulins are reportedly the antibodies (termed atopic reagins) responsible for allergic rhinitis and bronchial asthma.[7] As yet no other function for them is known, but apparently they do occur in normal nonatopic individuals.[8]

IMMUNOGLOBULIN CHANGES IN DISEASE

Abnormalities in specific immunoglobulins may be qualitative or quantitative. Very little is known as yet about functional or qualitative abnormalities. Quantitative changes accompany *immunoglobulin deficiency diseases* and the diseases with excessive amounts of immunoglobulins (the *gammopathies*).

TABLE 2

MAJOR IMMUNOGLOBULIN DEFICIENCY SYNDROMES

1. Transient Hypogammaglobulinemia
2. Congenital Hypogammaglobulinemia
 a. Sex-linked recessive (Bruton)
 b. Sporadic
3. Acquired Hypogammaglobulinemia
 a. Primary
 b. Secondary
4. Hereditary Thymic Aplasia
 a. With hypogammaglobulinemia ("Swiss type")
 b. Without hypogammaglobulinemia
5. The Dysgammaglobulinemias
 a. Type I. Deficient IgG and IgA, elevated IgM
 b. Type II. Deficient IgA and IgM, normal IgG
 c. Type III. Isolated IgA deficiency

Methodology—For routine work, our laboratory uses LKB Instruments, Inc. (Rockville, Maryland) immunoelectrophoresis and immunodiffusion apparatus, with agar gel as the supporting medium. Antisera can be obtained commercially from Hyland Laboratories (Los Angeles, California), Hoechst Pharmaceutical Company (Cincinnati, Ohio) or Immunology, Inc. (Glen Ellyn, Illinois). Immunoelectrophoresis is only a semi-quantitative method, but it is adequate for the study of most patients with immunoglobulin disorders. For precise quantitation, we use Hyland Immunoplates. Precise quantitation is particularly useful in the study of immunoglobulin-deficiency diseases.

Immunoglobulin-Deficiency Syndromes—The main immunoglobulin-deficiency syndromes are listed in Table 2. The term *hypogammaglobulinemia* indicates that all three types of immunoglobulins are affected. Usually IgG is less than 200 mg. per cent, and IgA and IgM are not detectable. Clinical manifestations include recurrent suppurative bacterial infections. An interesting point is that most of these patients handle viral diseases normally. *Dysgammaglobulinemia* denotes selective immunoglobulin deficiency. There are other immunologic deficiency diseases in which the defect is due to cellular abnormalities in lymphocyte function[9] or polymorphonuclear phagocytosis.[10] Ataxia telangiectasia is often associated with multiple immunologic deficiencies,[11] as is the Wiskott-Aldrich syndrome.[12]

Transient hypogammaglobulinemia is that which occurs in the neonatal months. The

transplacental IgG which the newborn has received from the mother gradually falls over one or two months. There may be a period of hypogammaglobulinemia before the infant's own IgG reaches levels above 200 mg. per cent. IgM appears early, depending on antigenic stimuli, and IgA appears relatively late. Cord-blood IgM levels above 21 mg. per cent are evidence of intrauterine infection.[13]

Congenital hypogammaglobulinemia was initially described by Bruton[14] as a sex-linked recessive heritable disease occurring only in males. Subsequent cases have occurred in females, and have been termed sporadic.

Acquired hypogammaglobulinemia may be primary, or may be secondary to some other disease process such as leukemia. The primary type is often manifested as recurrent pneumococcal pneumonia in an adult 20-40 years of age.

Hereditary thymic aplasia was initially described by Swiss workers (thus "Swiss type" agammaglobulinemia), and it is found in patients with deficient immunoglobulins plus thymic aplasia, lymphocyte deficiency and impaired cellular immunity. These patients usually die in early infancy. Subsequent patients have been reported[9] with identical cellular and thymic abnormalities, but with normal immunoglobulin levels and better prognosis.

The dysgammaglobulinemias are characterized by selective immunoglobulin deficiency. The remaining immunoglobulins may be present in normal or excessive amounts. This may result in a normal electrophoretic pattern, and these conditions can often be diagnosed only by immunoelectrophoresis and quantitative radial immunodiffusion. There are many possible combinations of dysgammaglobulinemia, but only three types are sufficiently common to be considered here.

Type I dysgammaglobulinemia patients have deficient IgG and IgA; the IgM is elevated, perhaps as high as 1,000 mg. per cent or more. Recurrent infections occur, and the prognosis is poor.

Type II dysgammaglobulinemia is characterized by deficient IgA and IgM, but normal IgG. It is rare and seems to be a rather mild disease clinically.

Type III dysgammaglobulinemia designates selective IgA deficiency. This may occur in healthy adults and may be seen in patients with ataxia telangiectasia. The clinical significance of IgA deficiency is incompletely understood. Some patients have an increased incidence of respiratory tract infections.[6]

TABLE 3

GAMMOPATHIES (INCREASED IMMUNOGLOBULINS)

A. Polyclonal Gammopathies (Diffuse Increase)
 Examples are collagen vascular diseases, liver disease, chronic infection, lymphomas, sarcoidosis.
B. Monoclonal Gammopathies (Discrete Spike)
 1. Increase in whole immunoglobulin molecule:
 a. Multiple Myeloma (IgG, IgA type, or rarely IgD, IgE)
 b. Waldenstrom's macroglobulinemia (IgM)
 c. "Benign" monoclonal gammopathies
 d. Other lympho- and myeloproliferative disorders
 2. Increase in light chains (κ or λ):
 Bence Jones proteinuria with or without proteinemia
 3. Increase in heavy chain (Fc Fragment of IgG)
 Heavy chain (or Franklin's) disease

Gammopathy states (Table 3)—Increases in the immunoglobulins may be seen as a diffuse or general increase in one or more immunoglobulin class ("polyclonal gammopathy"), or as a discrete, homogeneous increase within a single class ("monoclonal gammopathy"). The terminology is based on Burnet's clonal selection theory of antibody formation, in which it is proposed that a simple antigen stimulates the proliferation of a single "clone" of cells (those cells arising from a single individual cell by means of asexual reproduction) that produce identical antibody molecules. Thus the product of a single clone (monoclonal) is homogeneous in electrophoretic mobility and antigenicity, and appears as a single spike on electrophoresis, or as a narrow, homogeneous precipitin arc on immunoelectrophoresis. "Polyclonal" applies to the production of many types of antibody by many different clones of antibody-producing cells, resulting in a heterogeneous population of immunoglobulins.

Polyclonal gammopathies are characterized by an increase in immunoglobulins which is generalized and diffuse. The diffuse increase often involves several immunoglobulin classes, but it may affect only one class. Examples include collagen-vascular diseases, chronic infections, liver disease and sarcoidosis. Figure 2 illustrates a polyclonal gammopathy.

Monoclonal gammopathies are characterized by a homogeneous increase within a single im-

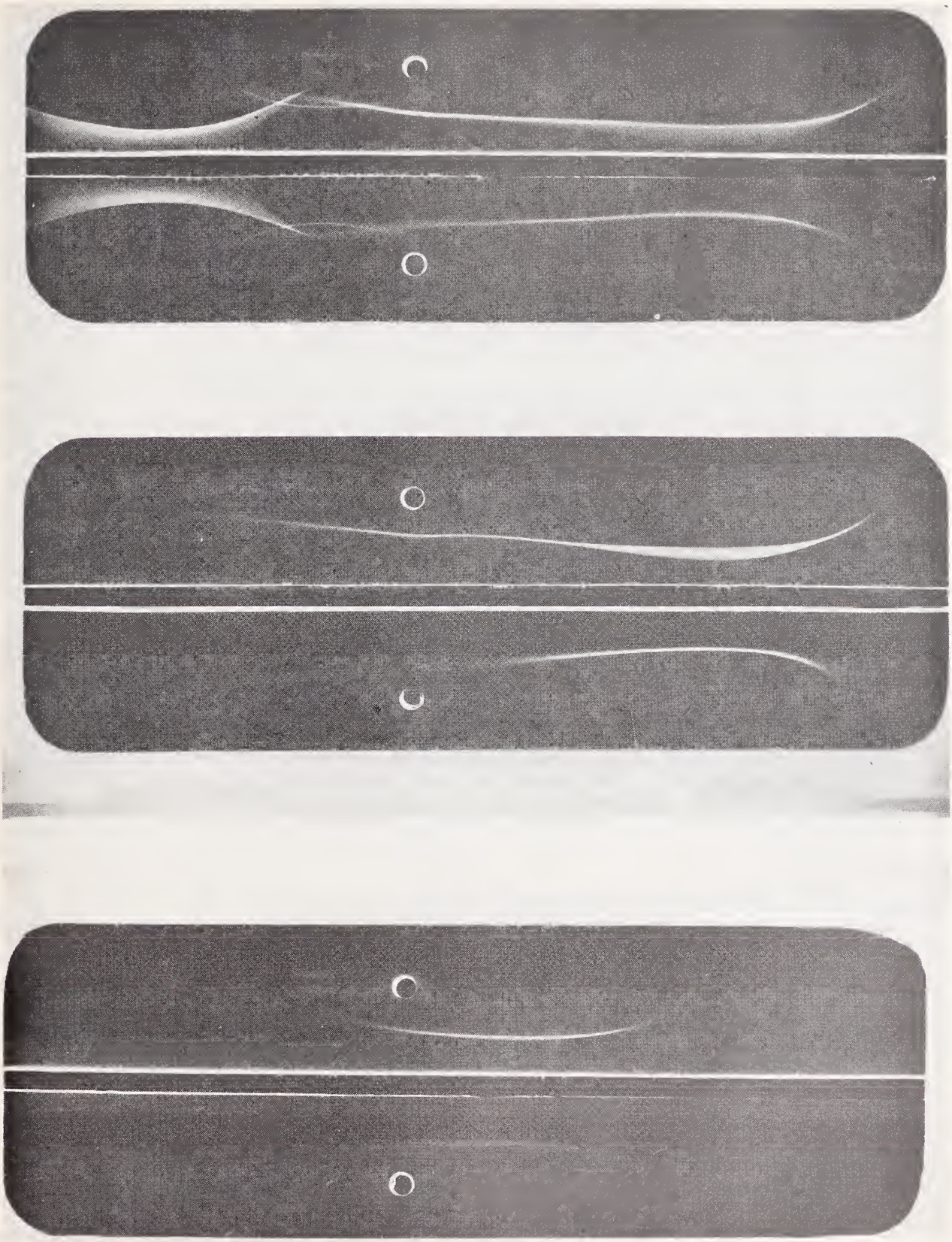


Figure 2. An example of a polyclonal gammopathy affecting IgG and IgA in a patient with hepatic cirrhosis. a. Top. Polyclonal gammopathy with diffuse increase in IgG. Upper well was loaded with the patient's serum and lower well with normal control serum. Goat antiserum directed against whole human serum was placed in the central trough. b. Middle. Same as "a." except that an antiserum monospecific for IgG was placed in the central trough. Note diffuse thickening of IgG in patient's serum (above) compared to normal serum (below). c. Bottom. Patient's serum above and control serum below with monospecific IgA antiserum in central trough. Note diffuse thickening of the patient's IgA. This patient's IgM was within normal limits.

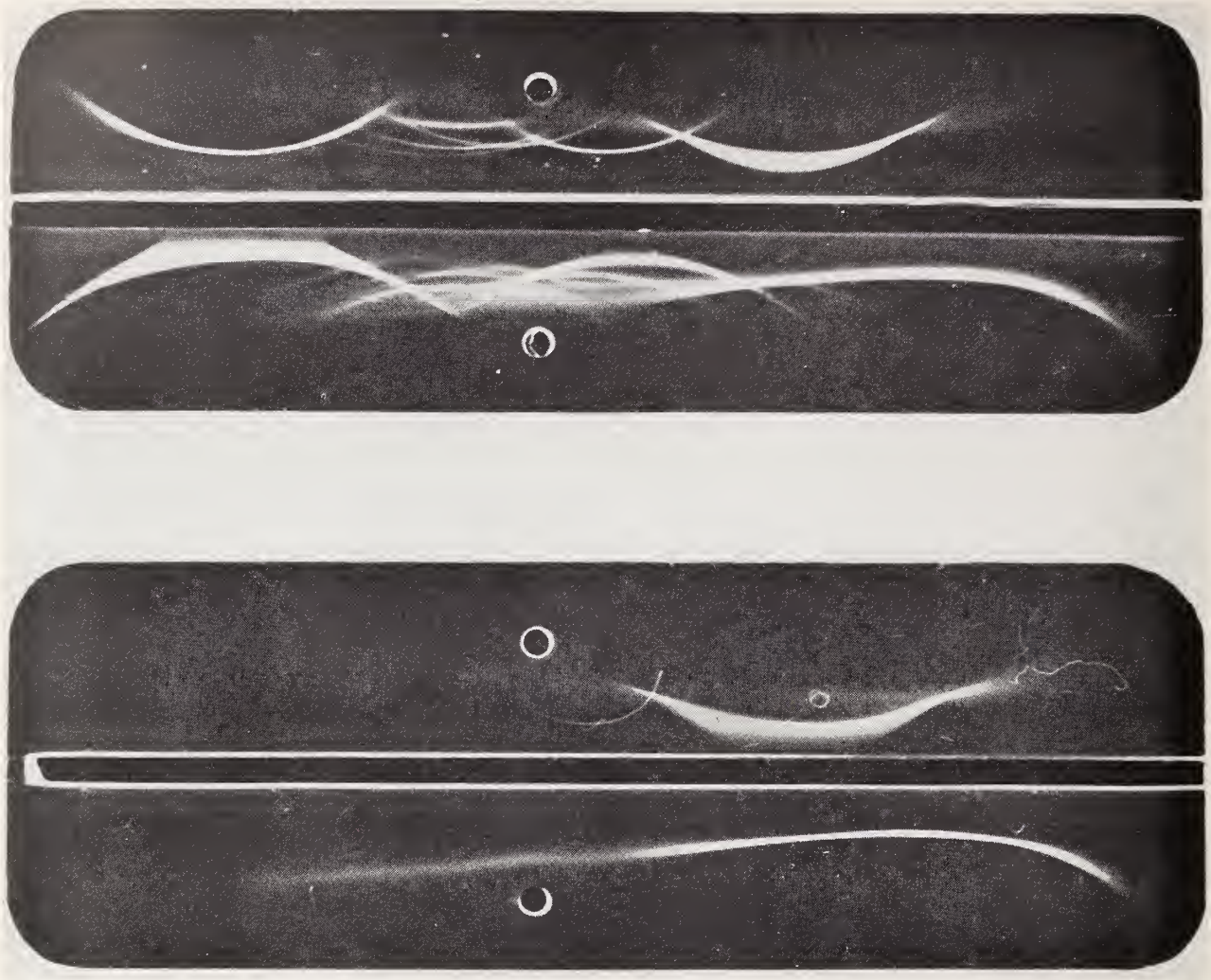


Figure 3. Example of a monoclonal gammopathy (IgG myeloma). Patient's serum was placed in upper well and control serum in lower well in each set. In top set, goat antiserum to whole human serum was placed in central trough. In lower slide, monospecific IgG antiserum was placed in the central trough. Note monoclonal increase in gamma globulin, identified as IgG by the monospecific antiserum.

munoglobulin class. Heavy chains and light chains are identical throughout the population of antibody molecules involved in the increase. Often the other immunoglobulins are decreased. Examples of monoclonal gammopathies are multiple myeloma and Waldenström's macroglobulinemia. In myeloma, the monoclonal protein may be the whole immunoglobulin molecule (IgG or IgA) or light chain only (Bence Jones protein). A rare variant is an increase in a portion (Fc fragment) of the heavy chain—so-called heavy-chain disease or Franklin's disease. This has been found for IgG only. Waldenström's macroglobulinemia is a monoclonal increase in IgM; it may be accompanied by Bence Jones proteinuria (consisting of light chains produced in excess). Monoclonal gammopathies have been described rarely in leukemia and lymphoma. An occasional patient with a monoclonal gammopathy is apparently well, and several have been followed for several years without disease. Waldenström has termed these "benign" monoclonal gammopathies. Monoclonal gammopathies are illustrated in Figures 3-5.

Amyloidosis may be a complication of monoclonal gammopathies (commonly multiple myeloma) or polyclonal gammopathies (commonly rheumatoid arthritis).

DIAGNOSIS OF IMMUNOGLOBULIN DISORDERS

Immunoglobulin deficiency diseases can be screened by paper electrophoresis. It can be expected to show gamma globulin deficiency below 200 mg. per cent except in the dysgammaglobulinemias. Definitive diagnosis requires

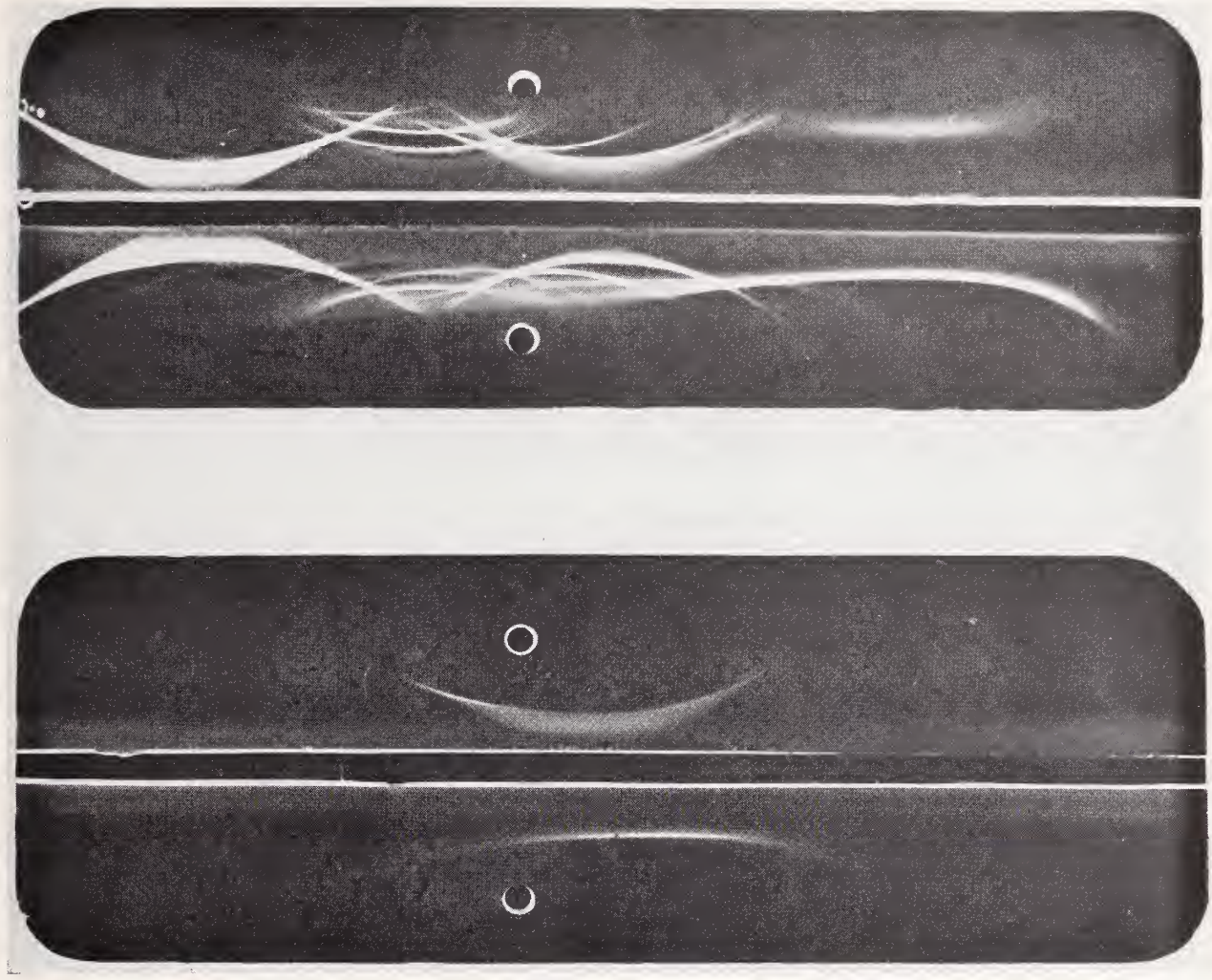


Figure 4. Monoclonal gammopathy (IgA myeloma). Patient's serum and control serum were placed as in Figure 3. Upper slide was developed with antiserum to whole human serum and shows a large increase in a fast-moving globulin, which is identified as IgA by the use of monospecific antiserum for IgA in the lower slide.

immunoelectrophoresis and immunoglobulin quantitation. With these techniques the specific disease categories should be apparent. Rarely, thymus-lymphocyte-delayed hypersensitivity immunologic deficiency diseases may be accompanied by normal immunoglobulins.[9]

If a patient presents with *increased gamma globulin*, paper electrophoresis will usually characterize the abnormality sufficiently to determine whether it is polyclonal or monoclonal. A monoclonal spike ("M" component, or paraprotein) is tall and narrow, usually having a "height-to-width ratio" of 4:1 or greater in the gamma region, and 3:1 or greater in the beta region.[15] The ultimate criteria for monoclonal protein are a narrow homogenous arc on immunoelectrophoresis and the demonstration of only one light-chain type. If the abnormal protein is present in very small amounts, it may be undetectable on routine electrophoresis. Immunoelectrophoresis with monospecific antisera will determine to which class or classes the increase belongs. If *monoclonal,* the diagnosis will be established as IgG or IgA myeloma or Waldenström's macroglobulinemia. Rarely in other diseases or apparently normal people, a monoclonal increase can occur which requires long followup study. Specific anti-light chain antiserum will be necessary in evaluation of Bence Jones proteinuria or proteinemia. Ultracentrifugation is sufficient to differentiate Waldenström's macroglobulinemia from other monoclonal gammopathies. Usually over 15 per cent of the serum protein is IgM or 19S in Waldenström's macroglobulinemia. The prognosis in this disease is usually better than in multiple myeloma. A few clinical differences among myeloma types have been described and

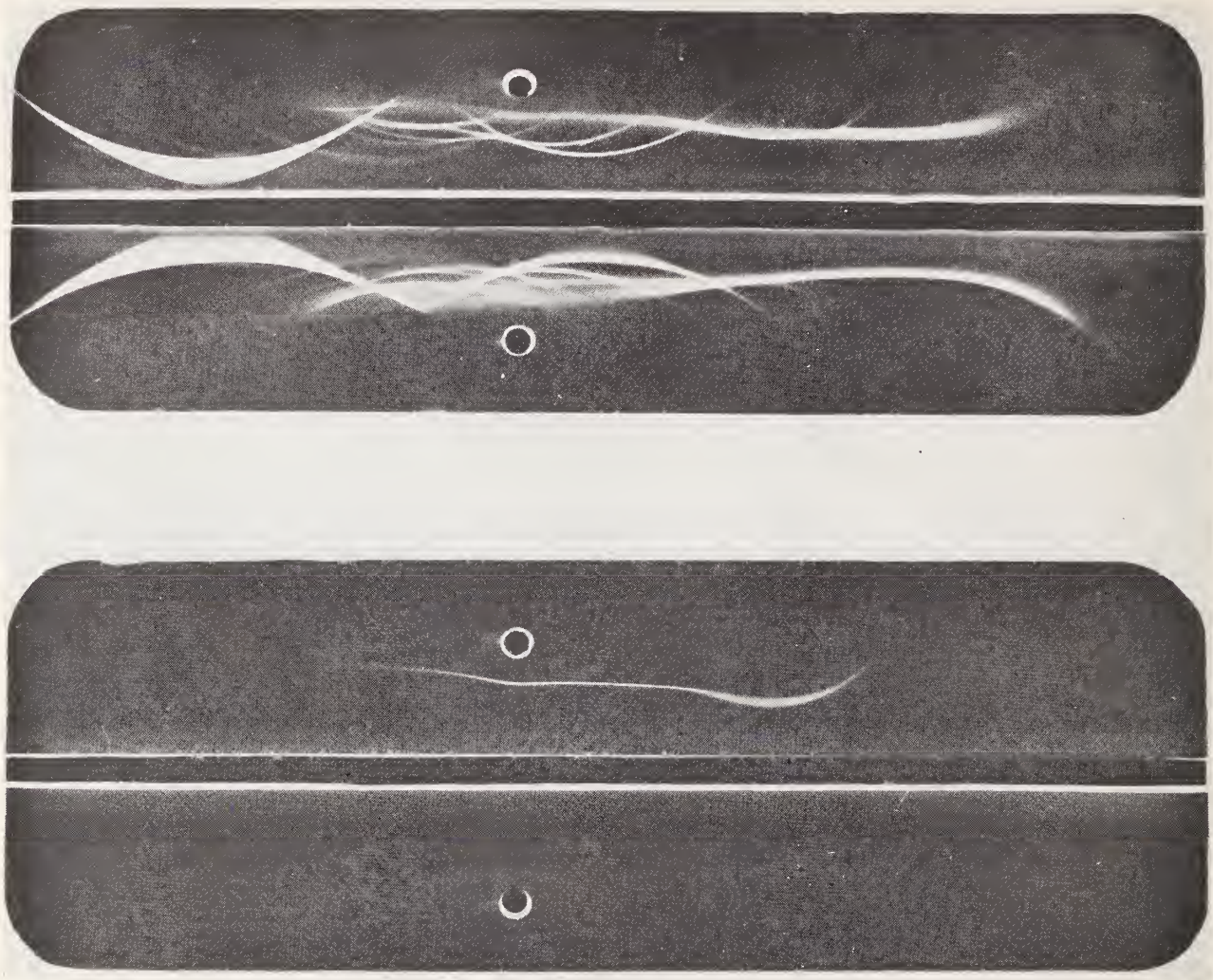


Figure 5. Monoclonal gammopathy (Waldenstrom's macroglobulinemia). Patient's serum and control serum were placed as in Figure 3. Upper slide employed antiserum against whole human serum. Monospecific IgM antiserum in the lower slide reveals a monoclonal increase in IgM. This pattern can also be seen in high-titer cold agglutinin disease.

may be of some prognostic importance.[16]

Polyclonal gammopathies require much ancillary information, both clinical and laboratory, before a definitive diagnosis can be made. Immunoglobulin studies are generally nonspecific and are not of much help in characterizing a particular disease. Qualitative studies, such as latex agglutination, LE prep, antinuclear factors, Coombs' test, serology and cold agglutinins may be helpful.

CONSIDERATIONS IN THERAPY

Immunoglobulin deficiency diseases are usually treated with gamma globulin replacement therapy and appropriate antibiotics when needed. Large doses of gamma globulin are required, approximately one-fourth cc. (16 Gm. per cent) of commercial gamma globulin per pound of body weight. The results are not ideal, but generally seem worthwhile; only IgG can be supplied in this way, since commercial gamma globulins contain only traces of IgA and IgM. Care must be taken in the administration of large doses of gamma globulin which contains "biologically active" aggregates of IgG; acute reactions may be encountered in immunoglobulin deficient patients.[17] We usually administer the full amount intramuscularly in divided doses, each dose not exceeding 2.5 cc. The administration of full dosage may take two days in an adult. In many adults gamma globulin replacement therapy may not be necessary. Antibiotic therapy p.r.n. often seems quite effective.

Gammopathies are treated individually, depending upon the basic disease process and the particular patient. Immunosuppressive drugs (e.g. Cytoxan), anti-inflammatory compounds

and steroids are the usual drug categories when treatment is required. The details of treatment of the specific disease entities which may be accompanied by immunoglobulin increases are beyond the scope of this discussion.

RETROSPECT AND PROSPECT

This paper has attempted to remove for the student and the practitioner some of the mystery surrounding the immunoglobulins and their abnormalities in disease. The basics of structure, classification and function have been discussed briefly, and the patterns accompanying certain disease states have been presented.

It is apparent that some disease entities are essentially defined on the basis of immunoglobulin abnormality: e.g. the various immunoglobulin deficiency diseases and the monoclonal gammopathies. Polyclonal gammopathies compose a heterogeneous group requiring individualization, and quantitative immunoglobulin studies do little to characterize individual diseases in this group.

Much is yet to be learned about the basic pathogenic mechanisms and those factors which instigate and control immunoglobulin production and regulation. Clarification of these problems is urgently needed if rational therapy is to be devised. Immune tolerance is being studied widely, and hopefully will lead to better treatment methods in many diseases involving immunity and hypersensitivity.

Immunology is of increasing importance to our understanding many hitherto obscure diseases. It is apparent that knowledge of certain basic immunologic principles is required if we are to evaluate and treat these diseases properly.

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Iowa Doctors Are Asked to Help in The National Study of Maternity Care

William L. Telfer, M.D., of Waterloo, chairman of the Iowa District of the American College of Obstetricians and Gynecologists, urges all physicians who perform deliveries to assume responsibility for making certain that the questionnaire entitled "Survey of Obstetrical Practice and Associated Services, Part One, of the National Study of Maternity Care" is completed and returned promptly by each of the hospitals in which they practice.

For this survey of obstetrics to be meaningful, it must provide a great deal of data that can serve as the basis for future policies and programs.

In many instances, Dr. Telfer says, physicians performing deliveries have been depending upon the administrator or other hospital personnel to complete this questionnaire. In reality, he contends, this responsibility belongs to the chief of obstetrics, or where there is none it belongs to the chief of staff of the hospital. A physician, he insists, should check the completeness of the answers to the questions.

The Therapeutic and Cosmetic Indications for Flush-Fitting Scleral Contact Lenses

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WITHIN THE PAST SEVERAL YEARS a new method of treating many difficult ophthalmologic conditions has been developed. It is the flush-fitting of scleral contact lenses.

Scleral lenses are basically of two types. The conventional or standard type is a preformed shell which parallels the sclera and vaults the cornea. The space between the back of the lens and the front of the cornea is therefore non-uniform. In an attempt to produce a scleral contact lens which would have a uniform lens-corneal relationship, Ridley developed a second type.[1-3] Such a lens is made from a mold of the sclera and cornea, and thus is flush-fitting. Only a uniform capillary tear layer separates the sclera and cornea from the posterior surface of the lens.

Although the therapeutic value of flush-fitting scleral lenses is recognized,[4, 5] their mode of action is not well understood. A large benefit is certainly derived from the manner in which the lens protects the diseased cornea from the lids. Perhaps the lens speeds the healing process by increasing the temperature of the cornea. Finally, the capillary tear exchange under a well-fitted lens is probably superior to the exchange without a lens. This might be especially true on a grossly irregular corneal surface containing areas of tear stagnation.

The first step in the manufacture of a flush-fitting scleral lens is to make an impression of the eye. A drop of topical anesthetic is instilled. Next, a multiperforated molding shell, with a central shaft through which the molding material is injected, is inserted under the lids to cover the sclera and cornea. By means of a syringe, molding material is then injected through the shaft of the casting shell and onto the eye, so that it extends to the fornices. After the material has set, the mold is removed. Dental stone is then poured into the mold and allowed to harden. When the stone is dry it is removed, and it then constitutes an exact duplicate of the sclera to the fornices and the cornea. A heated sheet of plastic is then pressed over the stone and allowed to cool. At the Ophthalmology Department at the University of Iowa, a machine is used which heats the plastic and then, using a strong vacuum, pulls it down over the stone. After the plastic has cooled, excessive material (that beyond the fornices) is removed, the edge is tapered, pumiced, and polished, and the finished flush-fitting scleral lens has thus been produced. If the stone over which the lens was pressed was indeed an exact replica of the patient's eye, then the lens will fit the eye so that a uniform tear layer separates the posterior surface of the lens from the cornea and sclera.

Fluorescein is used to check the uniformity of the tear layer, and therefore the quality of the fit. Many conditions for which flush-fitting scleral lenses are used are characterized by topographical corneal changes. When such changes occur, new lenses have to be made to maintain a proper fit. Often it is desirable to put optics into the lenses. This can be done by modifying the anterior surface of the lens, thus maintaining the flush fit.

INDICATIONS FOR FLUSH-FITTING SCLERAL CONTACT LENSES

The uses of flush-fitting scleral contact lenses can basically be divided into two categories—therapeutic and cosmetic. The following is a list of therapeutic indications:

Dr. Krachmer is a resident in ophthalmology at the University of Iowa College of Medicine. His work was supported by a training grant from the National Institute for Neurological Diseases and Blindness, NB 2050.

1. Bullous keratopathy
2. Chronic corneal ulceration
3. Keratoconjunctivitis sicca
4. Neuroparalytic keratitis
5. Exposure keratitis
6. A need for restoration and maintenance of conjunctival fornices (pemphigus, Stevens-Johnson, post burn)
7. Trichiasis
8. Descemetocele
9. Corneal burns

The many different treatments for bullous keratopathy suggest that there is no really satisfactory treatment for this condition. Patients with bullous keratopathy often have extreme pain, photophobia, conjunctival injection, and a marked reduction in visual acuity. Most of the forms of treatment are unable either to eliminate or reduce these symptoms, or if they do succeed, they result in disfiguration. The results obtained from the use of therapeutic flush-fitting scleral contact lenses have been extremely gratifying. Most patients either have no more pain, or have attacks that are markedly reduced in severity. Photophobia is greatly reduced. The eye becomes less red. Frequently there is even an improvement in visual acuity. Bulli are reduced to microbulli. In short, a flush-fitting scleral lens is a cosmetically acceptable form of conservative treatment of bullous keratopathy, and it should be tried before one resorts to more disfiguring therapy.

Chronic corneal ulceration is often very successfully treated by means of flush-fitting scleral lenses. Stromal herpes is a good example of such a condition. The eye is quieted down, and the ulcer crater heals in. Naturally it is necessary to remold and make a series of new lenses to adjust to the changing corneal topography. Sometimes keratoplasty can follow treatment by the scleral lens.

Because flush-fitting scleral lenses reduce the evaporation of tears, they can be used to treat severe keratoconjunctivitis sicca. Artificial tears should be used in conjunction with the lens.

Neuroparalytic keratitis can be very successfully treated by a flush-fitting scleral contact lens. Other forms of treatment such as tarsorrhaphies are sometimes inadequate in preventing pain, injection, and corneal breakdown, but the lens does a beautiful job of preventing these difficulties. It is interesting to note that within minutes of removal of such a lens, the eye becomes injected and painful.

Exposure keratitis is also accompanied by injection, pain and corneal ulceration. The flush-fitting scleral lens protects the cornea and keeps it moist.

Many conditions are associated with symblepharon formation. Among them are pemphigus, Steven-Johnson disease and the sequelae of chemical burns of the eye. Besides the problem of symblepharons, these conditions are commonly accompanied by lid pathology, with resulting trauma to the cornea upon blinking. Flush-fitting scleral lenses restore and maintain the fornices, and protect the cornea from the lids.

Trichiasis, if severe, can result in extensive corneal ulceration. In unusual circumstances, when surgical management is not possible or is unsuccessful, flush-fitting scleral lenses can be used to protect the cornea from the lashes.

The treatment for a descemetocele is a conjunctival flap or, if possible, keratoplasty. If the underlying condition renders the cornea a poor risk for keratoplasty, a conjunctival flap is the next choice. Because descemetoceles have been known to perforate under conjunctival flaps, a flush-fitting scleral lens should be considered. As in all other cases where such a lens is used, a better view of the cornea can be obtained through a lens than through a conjunctival flap.

Corneal burns (alkali burns in particular) have been treated by using flush-fitting scleral contact lenses. Often the lids are involved and become scarred. The lens prevents symblepharon formation, it protects the diseased cornea from the rough lids, and it is therefore useful in the management of this problem. The immediate first step in treating corneal burns is copious irrigation. In severe burns, scleral lenses with input and output stems have been used to allow for continuous irrigation. Constant irrigation, usually for two days, is followed by the application of flush-fitting scleral lenses. It is difficult to say just how much scleral lenses aid in healing alkali burns. The prevention of symblepharon formation is more obvious.

The second general use for flush-fitting scleral lenses is that of cosmesis. A blind, deformed

eye has been dealt with either by enucleation or by resigning oneself and the patient to the hopelessness of the situation. However a flush-fitting cosmetic shell can be used. Such a shell can be made to match the fellow eye, it has excellent movement because of the flush fit, and it can easily be removed when the physician has occasion to examine the underlying eye.

SUMMARY

Flush-fitting scleral contact lenses differ from conventional scleral lenses in that the flush-fitting lens is made from a mold of the eye, so that the posterior surface of the lens fits the contour of the anterior surface of the cornea and sclera. Although the mode of action of flush-fitting scleral lenses is not definitely known, the probable theories include protecting the cornea, increasing corneal temperature, and facilitating tear exchange. The manufacture of flush-fitting scleral lenses consists of taking a mold of the eye, making a stone replica of the sclera and cornea by filling the mold with dental stone, and then pressing heated plastic over the stone. Indications for flush-fitting scleral lenses include bullous keratopathy, chronic corneal ulceration, keratoconjunctivitis sicca, neuroparalytic keratitis, exposure keratitis, restoration and maintenance of conjunctival fornices, trichiasis, descemetoceles, corneal burns, and cosmesis.

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Morning Glory Seed Intoxication: A Case Report

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SINCE 1964 THERE HAVE BEEN scattered reports in which morning glory seed ingestion has been said to produce various psychedelic effects.[1-3] Several persons have commented on the similarity between the resultant symptoms and those observed following the ingestion of LSD-25, peyote, marihuana and psilocybin. There has been at least one case of suicide following morning glory seed intoxication, and there have been several cases in which brief psychoses have been associated with it.[2, 3]

It is known that seeds of the morning glory (Ipomoea tricolor) contain significant amounts of chemicals closely related to LSD-25.[4] Although LSD-25 and morning glory seeds excite similar reactions, including nausea, vomiting and occasionally diarrhea, those symptoms are more frequently seen following the use of morning glory seeds.

A spontaneous recurrence of the "psychedelic state" without any LSD or other such drug has been reported by other authors,[3, 5] and has been observed in some of our patients. That condition is rather unusual, and it will be a subject for further research and investigation. It raises many theoretical questions about memory and thought processes. Little is known about the management of the spontaneous recurrences.

REPORT OF A CASE

A 19-year-old Caucasian male entered the emergency room of a local hospital at 9:30

p.m., complaining that he was "tripping" and couldn't stop. He wanted to talk to a physician. He said he had not taken LSD, but had ingested 309 morning glory seeds approximately four hours earlier. At the time of his admission, the patient had a slightly flushed face. His pupils were extremely dilated, they were equal in size, and they were only slightly reactive to light and accommodation. His blood pressure was 110/60 mm. Hg, and his pulse rate was regular at 88/min. The remainder of the physical examination was unremarkable.

The patient's thinking revealed some peculiarities. Although he seemed oriented to time, place and person, he had some concern as to the reality of the persons and objects near him. He frequently asked the people talking to him whether they or objects in the room were actually there. The patient always seemed relieved when he was reassured that things were real. He reported having had a major distortion of his sense of time as well as having seen some "unusual" things two hours prior to his admission. While in the emergency room, he described some optical illusions that very closely resemble the "pseudo hallucinations"* frequently reported by users of LSD and related drugs.

Throughout the interview he seemed troubled by a rapid flow of ideas, and his verbalizations were punctuated by spells of absolute silence and refusal to answer even the simplest questions or to comply with commands. He seemed completely withdrawn into himself during those periods. At other times he exhibited considerable excitement for short intervals. He was very indecisive in thought and action, and his recent and remote memory showed appreciable but inconsistent defects. Concentration seemed beyond his ability on some occasions, but at other times he was normal in that respect. He had difficulty with abstract thinking, as evidenced by his very bizarre proverb-interpretations.

The patient had experienced five other "trips" (psychedelic experiences) previously. Three "trips" had been related to the ingestion of 150-200 morning glory seeds. (The patient explained that the best "trips" came from using "Heavenly Blue," "Pearly Gates," or "Flying Saucers" brands of morning glory seeds.) He and other users of morning glory seeds commonly take dimenhydrinate (Dramamine) prior to ingesting them, in order to withstand the nausea and vomiting usually associated with ingesting those seeds. On two other occasions he had used actual LSD for his "trips."

Following an admission history taking and evaluation, he was given 50 mg. of promethazine HCl (Phenergan) intramuscularly, and achieved good sedation. On the following day, his thinking was almost normal. His pupils were less dilated, but the remainder of his vital signs remained close to the admission values. Two days later, he voluntarily entered a psychiatric hospital for further evaluation and treatment.

Approximately five weeks after ingesting the morning glory seeds, and without taking additional drugs, the patient experienced a spontaneous return of some of the dissociative feelings that he had experienced earlier. They were occurring once or twice daily on the average, and were very frightening to him. We started treatment, using promethazine HCl (Phenergan) tablets, 25 mg. twice daily, and from the beginning of therapy a marked decrease in the number and the intensity of the "recurrences" was noted. Thus far, after 12 weeks of using Phenergan in this dosage, the recurrence problem has given him less difficulty, and his clinical condition has steadily improved.

SUMMARY AND COMMENT

This particular case emphasizes the physician's need to recognize morning glory seeds as a possible cause of the LSD experience. More cases may be observed if the current "hippie" cult continues.

The physiologic features commonly associated with acute ingestion of morning glory seeds are: (1) extremely dilated pupils; (2) low blood pressure and an increased pulse rate; (3) a flushing of the face; (4) extreme nausea; and (5) vomiting.[1, 3] Psychologically, one may see a state of confusion, excitement,

* David E. Smith, in the JOURNAL OF PSYCHEDELIC DRUGS, Vol. 1, No. 1, p. 3, describes pseudo-hallucinations in the following manner: ". . . Hallucinations, and by a hallucination I mean a false sensory perception without a basis in external reality, are rather rare with LSD. What is more common is what we may call pseudo-hallucinations, where the individual may see something but at the same time he also knows his perception doesn't have a basis in external reality. For example, he may see geometric forms of figures or brilliant colors, and he realizes that they really don't exist out there. . . ."[6]

disorientation and depersonalization which may appear as a toxic psychosis, schizophreniform in type.

It is interesting to note that some of the users of morning glory seeds have been able to find a pharmacologic agent, namely dimenhydrinate (Dramamine), which takes away the nausea and vomiting part of the symptom complex.

Our patient was initially sedated with Phenergan, 50 mg. intramuscularly, and his mental and physiologic abnormalities appeared to be resolved after about 24 hours.

Subsequent spontaneous recurrences of delusional or dissociative states when the patient has ingested no more seeds or drugs may present a difficult therapeutic problem.

This case has been presented as further substantiation that morning glory seeds are being used like LSD to produce "psychedelic trips." We have also reported a method of drug therapy that seemed to control subsequent spontaneous recurrences of the psychedelic experience in the single case reported here.

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Mercy Hospital, Des Moines

Clinicopathologic Conference

Fatal Aplastic Anemia Following Viral Hepatitis

SUMMARY OF CLINICAL FINDINGS

THE PATIENT, a 22-year-old single white female, was admitted to Mercy Hospital on December 1, 1966, with complaints of abdominal pain of nearly two months' duration. The pain had been intermittent, and was most severe after meals. A few days prior to admission the pain had become progressively more intense and was not relieved by antacids, which had provided temporary relief during the initial stages. There was no history of hematemesis or melena. Physical examination at her first admission revealed a questionable icteric tinge of the sclera. The heart and lungs were within normal limits. Examination of the abdomen revealed 2+ epigastric tenderness. The liver and spleen were not palpable. Pelvic examination was negative.

Laboratory Data: Urinalysis revealed a specific gravity of 1.008. Acidic, albumin, glucose and acetone were negative. Bile was positive (icto test); occult blood was negative; white blood cells were 5-10 per high-power field; microorganisms, few; epithelial cells, 10-20 squamous. The hemoglobin was 14.2 Gm.; hematocrit 42 per cent; red blood cells 4,690,000/cu. mm.; white blood cells 4,300/cu. mm., with 2 bands, 54 segmentals, 34 lymphocytes, 1 monocyte, 4 eosinophils and 2 basophils. Platelets were adequate. The sedimentation rate was 5 mm./hr. A VDRL was non-reactive. The blood urea nitrogen was 11 mg. per cent, and the glucose was 76 mg. per cent. A sigmoidoscopy on December 3, 1966, was negative. An x-ray of the chest was normal. An x-ray study of the gallbladder on two occasions revealed non-visualization of the gallbladder. Upper gastrointestinal and colon x-rays were negative. The patient was discharged on December 5, 1966, with the final diagnosis of cholecystitis, and she was put on a bland diet. Valpin, Mylanta, Seconal, Demerol and milk of magnesia were also given.

SECOND ADMISSION

The patient was readmitted a week later, this time with jaundice. Following her initial

dismissal from the hospital, she had developed jaundice associated with dark urine and light stools. She also complained of severe pains in the upper abdomen. On examination, the patient was jaundiced and afebrile. Examination of the abdomen again revealed 2+ tenderness in the epigastrium. Pelvic and rectal examinations were negative.

Laboratory Data: Urinalysis revealed amber-colored urine with a specific gravity of 1.026. It was acidic, there was a slight trace of albumin, it was glucose and acetone negative and bile positive (icto test), and it was occult-blood negative. There were 10-20 white blood cells per high-power field, occasional granular casts, a moderate number of microorganisms, and a small amount of mucus. The epithelial cells included 8-12 squamous. The hemoglobin was 13.6 Gm., the hematocrit was 41 per cent, and there were 4,620,000 red blood cells per cubic centimeter. The white blood cell count was 4,000/cu. mm., with 50 segmentals, 30 lymphocytes, 5 monocytes, 5 eosinophils, and 2 basophils. The platelets were adequate. The sedimentation rate was 2 mm./hr. On December 14, 1966, a liver profile showed a total bilirubin of 11.9, with the direct 3.8 and the indirect 8.1. The cephalin flocculation was 2+; the cholesterol 167; the alkaline phosphatase 26.2 KU units; the total protein 5.5, with albumin 4.1 and globulin 1.4; the albumin/globulin ratio 2.2 to 1; the prothrombin time 15.5 seconds; the prothrombin activity 57.5 per cent; the thymol turbidity 1.5 units; the serum glutamic oxaloascetic transaminase 730 F. units; the urine bile-positive; and the urine urobilinogen 1.2 Ehrlich units. Red-cell fragility showed initial hemolysis at 0.44 per cent, and complete hemolysis at 0.16 per cent. The PTT was 54 seconds (normal 40-80 sec.). A lupus erythematosus prep was negative.

On December 16, 1966, the gallbladder was removed, and it showed chronic cholecystitis. During the next few days the serum bilirubin showed a sustained elevation to a maximum of 16.6 mg. per cent, with a direct of 4.9 and an indirect of 11.7 mg. per cent. A liver biopsy done on December 16, 1966, revealed scattered areas of hepatic-cell necrosis, degeneration of liver cells, and an associated inflammatory reaction in perilobular and intralobular regions, with a predominance of mononuclear cells and some eosinophilic and neutrophilic leukocytes. The patient had an uneventful postoperative course, and was discharged as improved on December 28, 1966, to be followed later at her doctor's office. Two days prior to her discharge, the serum bilirubin was found to be 7.2 mg. per cent, with 3.8 mg. per cent direct and 3.4 mg. per cent indirect. The SGOT was 590 F. units.

THIRD ADMISSION

One month later, on February 1, 1967, the patient was admitted for the third time. During the interval she had received a low dosage of cortisone for about two weeks. Approximately two weeks prior to her third admission, she had developed generalized petechiae and ecchymoses associated with marked fatigue, necessitating hospitalization. Physical examination at that time revealed no significant findings other than the generalized petechial hemorrhages and ecchymoses. The liver was palpable but not enlarged. The spleen was not palpable. A preliminary blood study showed the hemoglobin to be 8.9 Gm., the hematocrit 25 per cent, the red blood cells 2,810,000/cu. mm., and the white blood cells 1,600/cu. mm., with 40,000 platelets. The sedimentation rate was 44, the PTT 69 sec., the bleeding time 6 min., and the clotting time 5 min., with no clot retraction. The liver profile on February 7 was interpreted as essentially normal.

Bone-marrow examinations on two occasions showed the following results:

	2-3-'67 %	2-16-'67 %
Blasts	0.7	1.5
Progranulocytes	3.1	0.1
Neut. Myelocytes	15.3	3.5
Eos. Myelocytes	1.4	4.5
Neut. Metamyelocytes	13.7	3.5
Eos. Metamyelocytes	1.6	4.5
Neut. Bands	7.7	3.1
Eos. Bands	0.3	2.4
Neut. Segs.	5.2	0.8
Eos. Segs.	0.3	4.8
Lymphocytes	41.1	45.5
Plasmocytes	0.3	1.0
Megakaryocytes	Few	Not seen
Pronormoblasts		
Bas. Normoblasts	0.7	0.3
Poly. Normoblasts	4.4	0.5
Orth. Normoblasts	5.4	0.3
Reticulum Cells, Histiocytic		16.4
Red Cell Series, Total	10.5	1.1
White Cell Series	90.5	82.5
Tissue Cells		16.4

The patient was started on a course of treatment which consisted of prednisone, 15 mg. q.i.d.; folic acid, 5 mg. q.i.d.; B_{12} injections every four or five days; Delatestryl, 2 cc. intramuscularly every third day; and fresh whole-blood transfusions. The treatment was continued, and she received three units of fresh whole blood during her hospitalization. Her anemia improved slightly, but the white blood cell and platelet counts showed no appreciable changes. Gradually the hemoglobin reverted to its original levels. Repeated LE preparations were negative. The above regimen was maintained, and the patient was discharged on February 22, 1967. She subsequently moved to Waterloo, where she died in June, 1967, seven months after the onset of her illness.

CLINICAL DISCUSSION

Dr. Paul From, internist: Looking back over this protocol, I should say that this patient had two disease processes, rather than just one. At her first admission she was complaining of epigastric pain, which at first had been relieved by antacids but more recently couldn't be relieved by that means. And eating appeared to aggravate the pain. Epigastric pain, of course, draws our attention to the stomach, where we might basically think of some peptic ulcerative process, except that the pain-food-relief cycle was absent. One might think more of a gastritis or of a stomach distention exerting pressure upon some other organ within the abdominal cavity. At that time questionable icterus was noted, although we have been given no report of liver-profile studies done at that time. From the completeness of the studies that she had during her four-day first hospitalization, it would seem to me that at least the bilirubin was investigated, but we are not told that it was.

Within one week she developed definite jaundice, without fever. There was tenderness over the liver at that time. The liver profile included elevation of the direct and indirect fractions of the bilirubin, a definite elevation of the transaminase, bile in the urine, a mild elevation of alkaline phosphatase, and a very mild decrease in total protein. The remainder of the liver profile was essentially normal.

Especially with the elevation of the serum transaminase, these findings would indicate active parenchymal liver disease. That, I think, was borne out at the time of surgery, when her gallbladder was removed, and the diagnosis of chronic cholecystitis was made. A liver biopsy was taken at surgery, and was classical for a viral type of hepatitis, with hepatic-cell necrosis, degeneration of liver cells, and inflammatory reaction in the paralobular and intralobular areas. No LE cells were seen. There was nothing in the liver to make one think of a lupoid hepatitis, which certainly is something one would want to consider in a girl of this patient's age. The resistance to red-cell fragility would make one think of a hypochromic state, even though the hemoglobin was normal at the time. It would have been well for us to know the serum-iron level then. About 15 per cent of the body's total iron stores are within the liver, and whenever there is acute disease of the liver, the serum iron tends to elevate markedly as the iron is released from the liver. In the face of acute hepatitis, the patient did surprisingly well following cholecystectomy, as far as her bilirubin was concerned; there was a decrease in the transaminase.

Then she returned about a month later with symptoms of anemia and thrombocytopenia, with petechiae and ecchymoses. At that time another liver profile was entirely normal, and one could assume that the previous episode of hepatitis had subsided, and that something had happened to give her an aplastic anemia. Since there were anemia, thrombocytopenia and leukopenia, we had the diagnosis of aplastic anemia. It was borne out by the two bone-marrow aspirations, both indicating a marked decrease in the red-cell series and the presence of a number of unknown cells, but without any blast cells to indicate a disorder such as leukemia. Her treatment consisted of the best bone-marrow stimulants we have—cortisone, folic acid, vitamin B_{12} and testosterone. The treatment was good. She was given fresh whole blood, but as is the case in the aplastic anemias, which are irreversible, the outcome was fatal.

Now the interesting question in this case is whether there could have been any connection between the jaundice, or the liver disorder that caused it, and the resultant aplastic anemia.

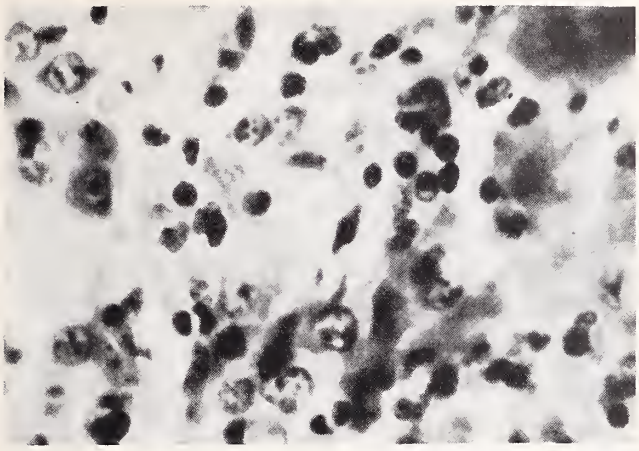


Figure 1. An area of viral hepatitis showing mononuclear cells and degenerated liver cells.

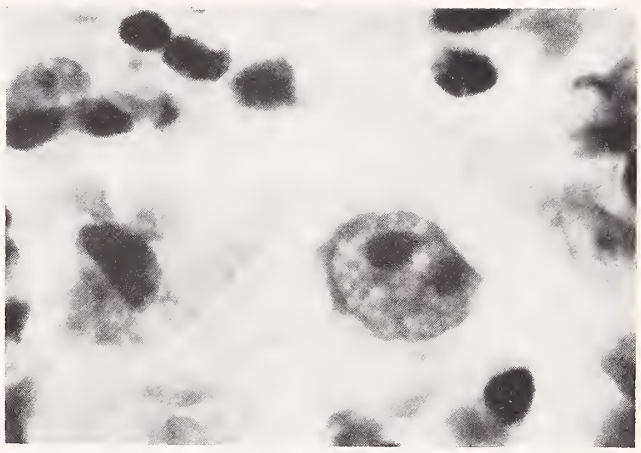


Figure 2. High-power view of liver cells with intranuclear inclusion bodies.

One wonders whether, at any time during the course of her illness, she was given chemotherapy such as chloramphenicol, which is known to cause aplastic anemia in certain cases. Many other chemicals have been implicated as causes of aplastic anemia. The anticonvulsive drugs, the antihistaminics, the antithyroid drugs, many sedatives, gold, phenylbutazone or Butazolidine, nitrogen mustard, the amphetamines, and hydralazine or apresoline have all been suspected of causing aplastic anemia. Some of the antimalarial compounds also may cause it. Some of the hydrocarbons, especially those in gasoline or that sort of thing, are thought possibly toxic to the bone marrow, and thus productive of aplastic anemia. If we rule out exposure to these known causes of aplastic anemia, we then are left with a diagnosis of idiopathic aplastic anemia, for which there is no real treatment. It may be that the treatment is no better for aplastic anemia resulting from the known causes than it is for disease of the idiopathic type, but there probably are certain legal implications if one has been subjected to some drug known to produce aplastic anemia.

I think this girl exhibited two disease processes. First, she had a hepatitis of viral origin, and second, she had aplastic anemia. There was nothing in the case to make one suspect any autoimmune mechanism behind the disease. She recovered completely from the former, and then developed an aplastic anemia which was fatal.

Dr. Joseph Song, pathologist: May we see the first slide, please?

Indeed this patient had a viral hepatitis, which is seen on this slide. This is a low-power view of the single hepatic lobule in which we see a large number of mononuclear cells, single-cell necrosis of the liver cells, and multinucleated hepatic cells.

The next slide is a high-power view of the single hepatic lobule of intralobular zeon, in which one can see many round-cell infiltrations —degeneration of the hepatic cells which is signified as the ballooning of the cytoplasm (Figure 1).

Next slide, please. There are a large number of mononuclear cells with hepatic-cell necrosis here, and an intranuclear inclusion body within this particular cell (Figure 2).

Let us review the liver profiles again. The first one was taken on December 13, 1966, at which time the findings indicated a significant degree of hepatocellular damage. The second liver profile, which was done on February 1, 1967, was thought to be essentially normal, indicating that the liver function had returned to normal.

Postmortem sections of the liver were obtained through the courtesy of Dr. James Collins, a pathologist in Waterloo, where the patient died. Although there are many red cells in the hepatic sinusoids, there is no evidence of any necrosis or cellular degeneration. However a slight residual inflammatory reaction in the periportal space is still present.

The next slide shows us the hematologic data gathered on two occasions. The blood study done on December 30, 1966, revealed es-

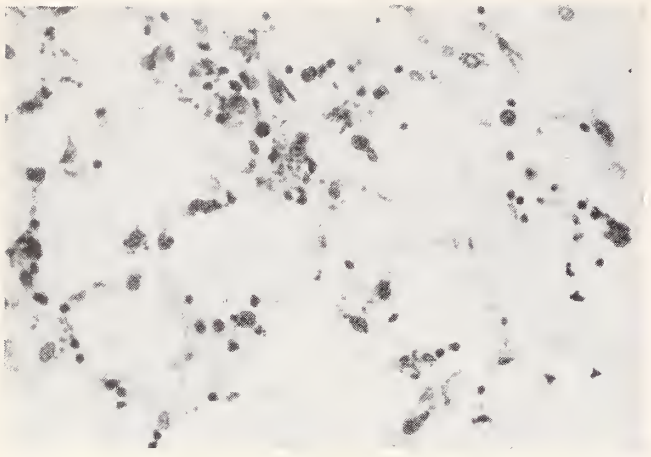


Figure 3. Aplastic marrow largely replaced by fat.

sentially normal indices. On February 1, 1967, during the patient's second hospitalization, we notice that the hemoglobin was markedly reduced, with a striking decrease in white cells and no visible clot retraction, and with very markedly reduced platelets.

The next slide shows us the first bone-marrow smear. It pictures fairly normal hematopoietic cells having the usual ratio of the myelo-erythroid series. The next slide represents the second bone-marrow examination of this patient, which was done on February 1, 1967. It shows many reticulum cells and endothelial elements, and numerous lymphocytes. The myeloid and erythroid series and megakaryocytes are strikingly hypoplastic. The next slide is a section obtained from the autopsy on this patient, showing the marrow space completely replaced by fatty tissue and reticular-endothelial cells (Figure 3). It is a typical example of fatal aplastic anemia.

DISCUSSION

Viral hepatitis and aplastic anemia are not a rare combination. Their concurrence might, therefore, represent chance. However an increasing number of case reports dealing with young patients who died of aplastic anemia while convalescing from hepatitis suggest that the two entities may not succeed one another coincidentally, but rather that the sequence of events may be related. Levy and associates published an excellent article entitled "Fatal Aplastic Anemia After Hepatitis" in the NEW ENGLAND JOURNAL OF MEDICINE during 1965.[1] Earlier, in 1962, Deller *et al*[2] described a 17-year-old boy in whom pancytopenia developed about seven weeks after the onset of apparently classic infectious hepatitis. Two other cases had been reported even earlier, in 1955[3] and in 1956.[4] In them, the pancytopenia developed two and six weeks after the onset of hepatitis. All patients died, and autopsy revealed complete bone-marrow aplasia. When the patient had survived for several months after the hepatitis, the liver was described as normal. Five patients described by Levy and associates developed pancytopenia one, three, five or seven weeks after the onset of hepatitis. All were children or young adults. Four of the five were males, and all three of the previously reported cases were also in males.

According to the authors referred to above, there was no history of exposure to any of the known toxic agents, but that negative finding does not rule out toxicity from some ordinarily non-toxic exogenous material.

The production of bone-marrow aplasia by a substance which is not ordinarily myelotoxic but which might become so as a result of liver insufficiency, from whatever cause, must be considered.[1] Conceivably the accumulation of such toxins to concentrations deleterious to the bone marrow could occur and not become manifest for a time. Thus, according to Levy and associates, progressive hypoplasia might follow, and irreversible aplasia might be found at a time when hepatic function was returning to normal. Deller and associates[2] suggested an autoimmune mechanism to explain the development of bone-marrow failure weeks after the onset of hepatitis. In support, they cited cases of hepatitis in which, after a latent period, hemolytic anemia or thrombocytopenic purpura developed. These are conditions that are generally classified as autoimmune. However the development of bone-marrow aplasia is not characteristic of any known hypersensitivity reaction.

Bone-marrow failure due to infection is another possibility. Viral as well as bacterial infections are known to affect the marrow. Anemia does not usually develop if the infection is brief, but it can progress rapidly in a patient with a hemolytic phase. Bacterial infections usually stimulate the release of increased numbers of neutrophils and platelets. A few bacterial infections such as those due to

Salmonella and Brucella are characterized by leukopenia.

Viral infections are known to depress one or all three elements of the peripheral blood, according to Clement.[5] In 1939 Hammon and Enders[6] showed that the virus of malignant leukopenia caused bone-marrow aplasia in cats. More recently, pancytopenia has been noted in viral murine hepatitis by Piazza and associates.[7] These hematologic changes are associated with hypoplasia of the erythroid series, and a maturation delay in the granulocytic and megakaryocytic elements of the bone marrow. The high virus concentration in the bone marrow and lymphopoietic tissues suggests that the hematopoietic changes might be produced by an active multiplication of the virus in the bone marrow. Levy and associates further stated that temporary bone-marrow hypoplasia had been reported after the administration of ribonucleic acid-containing virus of Venezuelan aquine encephalitis to patients with lymphoma and to normal human volunteers by Tigertt,[8] in 1962. Fever developed within 24 hours, and then recurred after one week. During the second period of fever, pancytopenia was seen, with marked hypoplasia of the bone marrow. The response was more marked in the patients with lymphoma than in the normal controls. Complete hematologic recovery occurred in both groups within three or four days. Bone-marrow aplasia with pancytopenia was observed in dengue fever by Nelson and Bierman,[9] in 1964. Thrombocytopenia, which was the most prominent feature, was thought to be the result of a direct action of the virus upon the megakaryocyte. Bone-marrow recovery usually occurred seven to 10 days after the aplasia was observed. The myxoviruses, which are also ribonucleate viruses, cause influenza, parainfluenza and mumps infections—all those organisms have been associated clinically with leukopenia. A ribonucleic acid-containing myxovirus was isolated from the urine and the serum of patients by Liebhaber and his coworkers[10] in 1964.

In experimentally-induced infectious hepatitis, leukopenia begins in the first 24 to 48 hours of fever, according to Havens and Marck.[11] Normal counts are attained by the end of the second week. Conrad *et al*[12] stressed the fact that infectious hepatitis should be recognized as a generalized disease. An infection resulting in a viremia might well lead to hepatitis with one incubation period, and to bone-marrow insufficiency with another. However viruses—particularly those containing RNA—are capable of doing great harm to the hematopoietic system, according to Levy and associates.[1]

Although a number of possible mechanisms have been outlined, the pathogenesis for this syndrome of fatal aplastic anemia following hepatitis remains obscure.

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Requests to Physicians With Indian Patients

Because the USPHS Division of Indian Health anticipates a limited budget for this fiscal year and needs to maintain close control of contract medical-care funds, it requests prior notification of all non-emergency medical care to be provided its beneficiaries. For emergency care, the Division requests notification within 72 hours after the care was provided.

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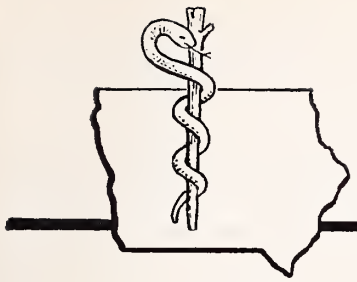
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Editorials

THE MOTIVATION OF THE COLLEGE STUDENT DRUG-TAKERS

In a recent article on the subject of the use of hallucinogenic drugs on campus, the results of a questionnaire administered to random samples of undergraduate students at Yale and Wesleyan Universities revealed that one of every five students at each of those institutions had used hallucinogenic drugs at least once.* Marijuana was the drug most commonly used.

Adults simply cannot understand why young people experiment with these drugs, or why some of them become addicted to their use. A comment by one student, on the questionnaire which he returned to the authors, gives a clue to the motivation which prompts youth to seek an escape from the realities of life:

"I consider it now a part of the growing up process. It *was* an answer; it no longer is. I am still overwhelmed by the madness that is my country, but I must find another way of coming to terms with it."

Surely much of the rebellion of youth and of youth's disregard for adult values must be in response to "the madness that is my country." The present generation of adults cannot be very proud of the state of the country or of the world.

Our plea to youth should be for them to make a positive contribution toward the solution of social, economic and political ills. By resorting to "drop-out," to "hippiedom" or "pot," or by rioting on street or campus, they compound our problems. The better way "to come to grips with it" is for them to apply themselves seriously in preparation for service to mankind.

The physician in his relationship with young people can have a significant influence upon them. Running away from the realities of life does not resolve its complexities and ills. By serious study and the practical application of knowledge, young people can help to make this a better world, and by so doing resolve their own inner conflicts.

* Imperi, L. L., Kleber, H. D., and Davie, J. S.: Use of hallucenogenic drugs on campus. JAMA, **204**:87-90, (June 17) 1968.

EXPERIENCE WITH LIVE-VIRUS MUMPS VACCINE

Several recent reports have related the outcome of studies on the administration of live, attenuated mumps-virus vaccine to children. Now that the vaccine has become commercially available, it should be of interest to physicians to learn of the experiences of others in its use.

In February of this year Hilleman, who developed the vaccine, and a group from the University of Pennsylvania reported that there had been 43 separate studies of the vaccine carried out under the direction of 25 clinical investigators.* These studies were done in pediatric clinics, in health-insurance and public-health programs, and in industrial groups. As of last September, a total of 16,715 persons had received the vaccine. Among them there were 6,283 initially seronegative children and 163 seronegative adults, of whom 132 were males. The conversion rate for children was 96.9 per cent, and for adults 92.6 per cent. The Philadelphia group said that there was no substantial decline in antibody titer up to two years after administration of the vaccine.

According to the authors, the personal dis-

* Hilleman, M. R., Buynak, E. B., Weibel, R. E., and Stokes, J.: Live, attenuated mumps-virus vaccine. NEW ENGLAND J. MED., **278**:227-232, (Feb. 1) 1968.

comfort, the time-loss from school or work, and the complications involving the brain, auditory nerves, pancreas, testes and ovaries justify the use of a safe and effective live-virus vaccine. The Jeryl-Lynn strain of live-mumps-virus vaccine appears to induce a mumps-neutralizing antibody response in all but a small percentage of initially seronegative individuals. In their experience there was no evident clinical reaction following administration of the vaccine either in children or in adults. When challenged by exposure of vaccinated children to patients with mumps, the protective efficacy proved to be about 95 per cent, and it was shown to last for at least 20 months, which was the longest period of follow-up.

It was pointed out that the neutralizing antibody induced by vaccination persisted for at least two years with very little decline. This closely resembles the persistence of antibody following naturally-acquired mumps, thus suggesting that the immunity will be lasting. Co-administration of the material with live measles-virus vaccine caused no clinical reaction other than what could have been expected from the measles vaccine alone, and the serologic responses to both were satisfactory.

In a controlled study by a group from Chapel Hill, North Carolina, 2,965 school children were given the vaccine, and 329 children in the same population were given a placebo, and the efficacy of the vaccine was confirmed.** Ninety-five per cent of the vaccinated children were protected from the disease during the period of observation. A similar study with almost identical results was carried out in the pediatric well-child clinics at the U.S. Naval Hospital in Bethesda, Maryland.†

An editorial in the NEW ENGLAND JOURNAL OF MEDICINE raises some questions about the use of mumps-virus vaccine.‡ Although the reports suggest that this immunizing agent appears to be unusually efficacious, the fact that the level of serum antibodies following its administration attain levels as low as 15 to 25 per cent of the titers found after natural mumps-virus infection casts some doubt upon the duration of immunity. Further experience with the vaccine and the passage of time will help to resolve this concern.

The editorial points out that even if the vaccine fulfills its every promise, the fundamental question that arises is whether the time, effort and expense required to eliminate mumps as an inevitable infection of childhood or adult life can be justified. In view of the apparent general benignity of mumps, the unresolved question concerning the duration of immunity following use of the vaccine and a certain concern which accompanies the use of all vaccines, it is concluded that at the present time mass programs of mumps-virus vaccination are *not* recommended.

The endorsement of the live mumps vaccine by the USPHS Advisory Committee on Immunization Practices is a conservative one. The Committee suggests that the material may be considered for use in children approaching puberty, in adolescents, and in adults—especially males—if they have not had mumps. Although the vaccine is not specifically contraindicated for younger children, it is suggested that until more information is available on the duration of immunity, the vaccine is not recommended for routine use. It is urged that mumps immunization must not be permitted to jeopardize the effectiveness of public-health programs of established merit.

The Advisory Committee suggests:

1. Live mumps vaccine should not be given to children less than one year of age because of the possible persistence of interfering maternal antibodies.

2. High-risk groups. In view of the fact that epidemic mumps can be disruptive in large groups of susceptible individuals, children in institutions might benefit from vaccination.

3. When adults and adolescents who are susceptible to mumps are exposed to the disease, it is not known whether the administration of live mumps vaccine will provide protection. However there is no contraindication to its use at this time.

The Advisory Committee urges certain precautions in the use of live mumps vaccine:

1. Vaccination should not be done during an acute febrile illness.

2. The vaccine should not be given to indi-

** Sugg, W. C., Finger, J. A., Levine, R. H., and Pagano, J. S.: Field evaluation of live virus mumps vaccine. J. PEDIATRICS, 72:461-466, (Apr.) 1968.

† Margileth, A. M., Mella, G. W., and DiMoia, F.: Live mumps virus vaccine. MED. ANN. DIST. OF COLUMBIA, 37:197-201, (Apr.) 1968.

‡ 278:275-276, (Feb. 1) 1968.

viduals sensitive to egg protein or to the antibiotic neomycin.

3. Mumps-virus infection might be potentiated by severe underlying diseases such as lymphomas and leukemia.

4. Complications due to altered resistance might occur in patients undergoing treatment with steroids, antimetabolites and radiation therapy.

5. Though no untoward effects on the fetus have been recognized, it is reasonable on theoretical grounds to avoid using the vaccine during pregnancy.

6. It is urged that in order to permit an adequate evaluation of mumps vaccine, its simultaneous administration with other vaccines be deferred until the results of properly controlled studies become available.

SUPRAPUBIC ASPIRATION OF THE BLADDER IN PREGNANCY

A recent report on the routine suprapubic aspiration of the bladders of pregnant women in order to procure uncontaminated specimens of urine is a disconcerting one.* The authors even recommend, "It should be widely adopted as a method of choice for obtaining urine for investigation."

Somehow nature has provided a simple and physiologic method for the procurement of urine specimens, and though they may not be perfectly clean, by taking reasonable precautions one can obtain satisfactory specimens. The routine suprapubic aspiration of the bladder would appear to be an example of excessive investigative zeal and of undue enthusiasm over an obtuse approach to a simple objective.

McFadyn and Eykyn, of St. Thomas's Hospital Medical School, London, relate their experience with suprapubic aspiration (SPA) of 1,000 antenatal patients. Urine was obtained by this method at the time of the patient's first visit to the prenatal clinic. Three-fourths of the patients were first seen between the tenth and the sixteenth week, but the period of gestation varied from the eighth to the thirty-fifth week. All patients who attended the clinic were included in the study unless they had threatened to abort earlier in pregnancy or had a history of recurrent abortion. According to the authors, very few of the clinic patients refused to cooperate, and in fact nine women were screened in this manner during second pregnancies.

For each patient who was found to have bacteriuria in the aspirated specimen, a control patient was selected from others attending the clinic. They were matched for age, race, social class, parity and duration of gestation. Percutaneous suprapubic aspiration was performed four or more times on each bacteriuric patient, and on her control, unless they were first seen after 34 weeks.

According to the authors, for ease and for certainty of success in aspiration, the bladder must contain at least 250 cc. of urine. The more distended the bladder, the less discomfort to the patient, the easier the procedure, and the less the hazard of misdirecting the needle. The authors have found that the only completely satisfactory way to determine the degree of fullness of the bladder is a bimanual examination, and this also indicates the site for entry of the needle and the direction it should take. Urine was not obtained at the first attempt in five per cent of the patients.

In this study, organisms in any quantity were judged significant, since urethral and vaginal contamination can be totally avoided by this method. All specimens were checked promptly or were stored at 4°C. if there was any delay. Uncentrifuged urine was examined microscopically for white cells, and if any were present a count was made per high-power field. Cultures on blood agar plates were incubated aerobically anaerobically for three days. A pour plate in Mac Conkey agar was made for the purpose of counting colonies. In order to detect fastidious or slow-growing organisms, blood agar plates were used and were incubated for prolonged periods.

Among the 1,000 patients subjected to SPA,

* McFadyn, I. R., and Eykyn, S. J.: Suprapubic aspiration of urine in pregnancy. LANCET, 1:1112-1114, (May 25) 1968.

59 (5.9 per cent) were bacteriuric at the time of the first test. Escherichia coli were cultured in 39 patients; Paracolon in 9; Proteus in 6; coagulase-negative Staphylococcus in 7; and four other organisms in one patient each. In two patients there were mixed infections, and in four there was reinfection with a different organism or the same organism having a different pattern of antibiotic sensitivity. Of the initial specimens, 41 contained 100,000 or more organisms per cubic centimeter, and 18 contained fewer than this number. Particularly significant was the fact that pyuria was demonstrated in only two patients, and in both of them there were fewer than five white cells per high-power field.

Of the group of 59 bacteriuric patients, 15 were not treated when the condition was first detected. One of the 15 was lost to follow-up, but eight of the remaining 14 developed urinary symptoms that necessitated treatment. The other six patients remained free of symptoms despite persisting bacterial counts of 100,000 or more per cubic centimeter. Forty-four patients in whom bacteriuria was detected at the initial aspiration were all treated with appropriate antibacterial drugs.

One finding the significance of which is not understood was that 159 patients "had in their urine a slow-growing fastidious gram-negative bacillus." This organism was similar to one described in 1955 and designated Hemophilus vaginalis. In 12 patients this organism was associated with a slow-growing, variably hemolytic Streptococcus. In 63 patients organisms of this type were cultured consistently, and in 28 they were found in only one specimen each. In the remaining 68 patients variable results were obtained on subsequent aspirations. Cultures for these organisms are being continued, and studies are being carried out in an endeavor to assess their significance.

Of 98 control patients in whom the urine was sterile initially, one developed an E. coli infection later in pregnancy, and 13 subsequently had positive cultures for H. vaginalis.

In the group of 1,000 patients, 17 aborted between the tenth and twenty-fifth week. One of these abortions occurred on the day after a SPA, but in the other 16 the abortion occurred at least two weeks later, and in some cases after as much as six weeks. In two of those who aborted, the urine culture was positive for E. coli, and in two others H. vaginalis was present. The urines of the other 13 were sterile.

In discussing the subject, the authors stated that suprapubic aspiration of urine has been shown by others to be a safe procedure in adult patients and even in infants. Fear of injury to the uterus and its contents have unquestionably deterred obstetricians from using it in pregnancy. Abortion due to reflex irritation of the uterus is a possibility, but the abortion rate of 1.7 per cent in this series was very similar to the rate of 1.6 in a series of 500 patients with sterile urine reported in 1965. It was pointed out that amniocentesis is now a commonplace procedure in antenatal care, and since SPA is even less traumatic, it too should be widely adopted as the method of choice for obtaining urine for investigation.

Though dilution of bladder urine as a result of rapid hydration may reduce the concentration of bacteria, this problem is not confined to specimens obtained by SPA. It also applies to midstream specimens. It is emphasized that absolute counts are not necessary for the interpretation of an SPA specimen, for the normal urinary tract is sterile, and thus bladder bacteriuria must indicate infection, whatever the bacterial count. In 18 of the 59 bacteriuric patients the urine specimen contained fewer than 100,000 organisms per cubic centimeter.

The almost complete absence of pus cells in the bacteriuric urine, the authors found difficult to explain, even though bacteria in the urine are not invariably accompanied by leukocytes. They postulated that it was a consequence of dilution of the urine, inasmuch as white-cell excretion is independent of urinary flow. In patients with untreated urinary-tract infections, the leukocyte-excretion rate is reported to be in excess of 200,000/hr. Thus it is difficult to understand such a paucity of pus cells, even in dilute urine. In order to clarify this problem, hourly excretion rates would be necessary, and this measurement would require catheterization.

The authors acknowledged that other investigators using midstream specimens of urine have demonstrated incidences of bacteriuria between four and seven per cent. They asserted that part of those findings may have represented false-positives—the consequence of con-

taminations of specimens. The incidence of bacteriuria in their own series of 1,000 patients in whom specimens were obtained by SPA was 5.9 per cent, which is very similar to the rates reported by others who used conventional midstream specimens.

The study confirmed the findings of others that bacteriuria persists if not treated, and that almost half of these patients will develop symptoms which require treatment. However the authors admitted that there is considerable disagreement about whether or not the early detection and treatment of bacteriuria eliminates the problem of symptomatic infection in pregnancy. In their study they found that 1.6 per cent of women who had fewer than 100,000 bacteria per cubic centimeter of urine in early pregnancy developed infection later.

The significance of H. vaginalis in urinary cultures is not known. However inasmuch as urethral and vaginal contamination are eliminated by the technic of SPA, the authors concluded that this organism is probably a urinary pathogen. None of the patients from whom this organism has been isolated have been treated, and by careful follow-up it is hoped that the resultant incidence of clinical urinary infection can be determined.

In clinical research there unquestionably is justification for employing unusual procedures and techniques if there is no hazard to the patient. The study of percutaneous aspiration of the bladder in pregnant women is an interesting contribution, and does demonstrate, perhaps, a superiority over the conventional method of procuring urine specimens. However there appears to be no justification for the *routine* use of SPA in pregnant patients. The old-fashioned way still seems reasonably satisfactory.

SURGICAL TREATMENT OF ABDOMINAL AORTIC ANEURYSM

A recent report from the University of Rochester Medical Center on 187 consecutive resections of abdominal aortic aneurysms should be helpful to the clinician in advising a patient with this formidable condition.* From an analysis of their experience, the authors conclude that the surgical approach is frequently justified.

Their study covers the period from 1955 to 1965, and the resections were all performed by the full-time faculty and resident staff. The analysis included the preoperative management, the operative technique and the surgical results. Complications, morbidity, and early and late deaths were also recorded.

It is pointed out that abdominal aortic aneurysm is usually the result of atherosclerosis. First there is a deposition of atheroma in the wall of the distal aorta, followed by asymptomatic dilatation of the weakened wall of the aorta, then a more rapid enlargement, usually accompanied by pain, and then finally rupture.

Emphasis is given to the observation that the stage at which an operation is performed is of great importance. A ruptured aneurysm has a much poorer prognosis than does an intact one. On the other hand, if operation is delayed, a more advanced stage of generalized atherosclerosis involves other vital and it thus has an adverse influence on the outcome of surgical intervention. To bring out the influence of generalized atherosclerosis on the operative treatment, abdominal aneurysms were divided into three distinct groups:

1. *Ruptured aneurysms*, those in which bleeding had already occurred, either into the peritoneal cavity or into the retroperitoneal space before operation.

2. *Intact aneurysms* which required emergency resection largely because of pain.

3. *Aneurysms which were operated upon electively.* These were usually asymptomatic, or there were symptoms of abdominal fullness, pulsation or claudication of the extremities.

There were 41 patients with ruptured aneurysm, five of whom were women and 36 were men. The peak age at operation was between 70 and 79 years. Thirty-nine of the group had pain, especially consistent back pain which was severe and unrelenting. A complaint of generalized or localized abdominal pain was also

* May, A. C., DeWeese, J. A., Irwin, F., Mahoney, E. B., and Rob, C. G.: Surgical treatment of abdominal aortic aneurysms. SURGERY, 63:711-721, (May) 1968.

common. Shock was evident upon admission to the hospital in 23 of the group, and four additional patients developed shock during induction of anesthesia, despite transfusion as soon after admission as possible. Of the 41 patients, 19 were known to have coronary-artery disease. The diagnosis in most of these patients was made on clinical grounds. During the period 1955 to 1960, the hospital mortality for ruptured abdominal aneurysm was 71 per cent; from 1961 to 1965 it had fallen to 63 per cent. Among patients in shock, the hospital mortality rate was 77 per cent, whereas in the group without shock it was 47 per cent. The intraoperative mortality was very much higher in those patients in whom the rupture was into the peritoneal cavity than in those in whom the aneurysm ruptured extraperitoneally. Eight of the 41 patients who underwent resection of a ruptured aortic aneurysm recovered without complication.

In 11 patients an emergency operation was performed, usually with a preoperative diagnosis of ruptured, expanding or leaking aneurysm. However the aneurysms were found to be intact, and there was no bleeding outside the aortic adventitia. In some of them there was evidence of fresh blood between the layers of old mural thrombi. Nine of the patients were males and two were females, and the peak incidence was between the ages of 60 and 69. In most instances the patients were admitted with generalized abdominal pain of sudden onset. However in some of them there was localized pain. The severe back pain so characteristic of ruptured aneurysm did not occur in this group, and none of these patients were in shock on admission to the hospital. The duration of pain prior to operation was less than 24 hours in six patients; 24 to 72 hours in two; and more than 72 hours in three of this group. There were no operative deaths in these 11 patients, and the hospital mortality over this 10-year period was 36 per cent. There were two early deaths from myocardial infarction. In four of the 11 patients, death occurred late-after an average survival of 35 months. Five patients are living and well.

In 135 patients the operation was performed for the resection of an intact abdominal aortic aneurysm as an elective procedure. This group consisted of 16 women and 119 men, and the peak incidence in both sexes was in the seventh decade. Thirty-six of this group were totally asymptomatic; 40 had pain related to the aneurysm, and it usually was diffuse in nature. Among those who complained of pain, it had been present for at least six months in one-half of them.

In the 95 patients who had not experienced pain related to the aneurysm, other symptoms were usually present. They complained of a feeling of fullness after meals, of the presence of a mass in the abdomen, of abdominal pulsation, or of claudication in the extremities. In only one-third of this group had the symptoms been present for over six months. Among the asymptomatic cases, the aneurysm was detected on routine physical examination in 17 instances; during a previous laparotomy in eight; and by x-ray examination for some other problem in six.

X-ray studies were carried out in almost all of the patients who were subjected to elective resection. A soft-tissue mass was seen in 89 per cent of them, and linear calcification was observed in 75 per cent. Of 67 patients who underwent intravenous pyelography, evidence of an aneurysm was detected in one-third. Aortograms performed in 19 patients demonstrated the aneurysms in 17 instances. In 14 patients, x-ray studies failed to contribute to the proper diagnosis.

In the 135 patients subjected to resection during the 10-year period, the hospital mortality was 13 per cent. During the 1961 to 1965 period, the hospital mortality fell to 9.8 per cent. The longest survival had been somewhat over nine years after the operation.

Significant was the fact that 75 of the 135 elective patients had prior coronary-artery disease, on the basis of either history or electrocardiogram, and 34.6 per cent of them developed postoperative complications, of which 13 per cent were fatal. Among the 59 patients free from known coronary artery disease, some seven per cent developed cardiac complications. In the two groups non-cardiac complications occurred in 24 per cent and 18.7 per cent, respectively.

In their summation of their 10-year experience, the authors state that pre-existing coronary-artery disease was not found significant as a cause of hospital deaths in the group with

ruptured aneurysm. However in the elective group the importance of preexisting coronary-artery disease was reflected by an increased incidence of postoperative cardiac complications. Surprisingly, in those patients with previous coronary-artery disease who underwent elective resection, 65 per cent escaped recurrence of myocardial infarction postoperatively.

In the group of patients with ruptured aneurysms the greatest cause of early death was hemorrhage. In the elective group the most common cause of early death was renal failure, whereas myocardial infarction was the most frequent cause of late death.

The authors conclude that the analysis of their experience encourages an aggressive approach to the surgical treatment of abdominal aortic aneurysm. Surely a mortality of 71 per cent among patients undergoing resection of ruptured aneurysms and 13 per cent in those subjected to elective resection of an intact aneurysms fully supports their conclusion.

TELL IT LIKE IT REALLY IS!

It is uncommon that I find enough courage to disagree with Dan Crowley. Nonetheless I believe that in the editorial he wrote for last month's issue of this JOURNAL he has unwittingly distorted the case for chemotherapy in the treatment of inoperable or recurrent malignancies. In "Tell It Like It Is," he attempted to bring a wind of fresh realism to blow through what he considers to be the tottering, jerry-built philosophies of the chemotherapist. And yet I think he does both physician and patient a disservice by his very failure! Somehow or other, pessimism has been substituted for realism, and each solid, compassionate attempt at treatment is made to seem a blind or lily-livered choice of the path of least resistance. His goal is good, but somehow or other the reader loses his way amidst the peaks of action-verbs and along paths jewelled by alliterative modifiers.

Let us tell it like it *really* is! Chemotherapy and its adjuvant measures do not "cure" the types of malignancy we are discussing. But if this fact is not made clear to the patient and his family, the physician's failure is even greater than the "failure" of the drug. I am confident Dr. Crowley recognizes that chemotherapy *may* modify, ameliorate and palliate the courses of some incurable malignancies.

Are these not prospects which thoughtful and compassionate physicians would wish to extend to a patient in trouble? Chemotherapy does not cure, but it *may* buy time or comfort for the patient. Are these not desirable things?

"Biologic resistance" is the useful catch-phrase which covers all those things which stand between a patient and his cancer. The phrase seems to mean something to both physician and patient—an ill-defined barricade involving hope and faith, as well as immunosuppressive reactions and host-tumor relationships. There is universal agreement that this barricade must be maintained. High or low, strong or weak, it must be shored up and held intact as long as possible. And such a barricade may, on occasion, be reestablished after it has been breeched. To maintain this barrier for the longest possible time requires all the wits, wiles and tools of the physician. Why, then, should chemotherapeutic agents be withheld from the action? Is not one balk or timber as good as any other if it stems the tide?

Let us take the case of a county-seat town librarian—a spinster with a hundred friends and no relatives. She was brought to a hospital by ambulance and cart because pain prevented her attempting even the simplest movements in bed. X-rays showed the most extensive osseous metastases I have ever seen. The right breast was a distorted, puckered, hardened mass, heavy with the feel of cancer. No surgery or adequate radiotherapy was indicated or possible. Chemotherapy and hormonal measures were begun. She was up in a chair within ten days, and was ambulatory enough to make do at a friend's house within three weeks. In six weeks x-rays showed the ragged, eaten bones had become involved in a tremendous and universal osteoblastic process; new, solid bone was being laid down as building blocks in a rebuilt and rising barricade. She returned to her apartment, became self-sufficient, and took over her old job as librarian. Four years later I had a brief note from her physician: "Miss X died

suddenly in the night." No thoughtful physician would ascribe those four fruitful years to an idiopathic rebirth of "biologic resistance." Isn't it more sensible to recognize that chemotherapy and its adjuvants may have a role in manning the ramparts against cancer?

Then there was the widow with two children in high school. She had multiple subcutaneous metastases of breast cancer, from scalp to thighs. She had a tremendous will and overwhelming desire: "Doctor, you've got to find me four more years. The children need me a little longer." She got four more years! Six lesions were removed for biopsy; the rest disappeared. Her daughter married a fine, responsible young man; her son made his way to college on a full scholarship. And the patient? She died in a coma, after being jaundiced for one month. Who would like to tell her children that those four years were not bought by chemotherapy?

I remember the sister of a surgeon. She had bilateral radical mastectomies because of breast cancers. In a few years the local skin recurrences came. Hormone therapy and x-ray treatments could not keep pace with the cancer, and the recurrences erupted into a raw, weeping mass across her chest. She stopped teaching school because the drainage necessitated large and frequently-replaced dressings. She was short of breath. A chest x-ray looked as if a puff of smoke had swirled about inside her ribs —a wildly-growing lymphogenous metastasis. Three weeks after the initiation of chemotherapy and without other measures, there were no new lesions and her chest was healing. I don't know where the epithelium came from, but within three months her chest wall was healed and all evidence of lymphogenous pulmonary metastasis was gone. She taught school for an added 18 months, and then her chest wall broke down again. She was hospitalized and another chemotherapeutic agent was tried. She died ten days later of aplastic anemia and hemorrhage. She had bought a happy, productive 18 months, and her husband, her brother and her children expressed their gratitude for that interval. Certainly *her* biologic resistance had not had much to recommend it until thiotepa and Cytoxan came along to buoy up its overwhelmed and awash facilities. True, her death came with the action of 5FU on a bone marrow laden with cancer cells.

There are others, but let me tell you of the matriarch. She walked into the office with two canes and her husband supporting her. Her pelvis was unstable because of a pathologic fracture of the pubic ramus. She had "pleurisy" because of multiple spontaneous rib fractures on both sides. She bought both time and comfort. She enjoyed Miami Beach without canes, and took advantage of the water as well as the sun. She spent a week in San Francisco, care-free and pain-free. Was it worthwhile? Ask her husband and ask her daughters about the family Christmas at home! Ask the grandchildren about the picnic on the family farm! Ask her minister! Each day we all die a little —some just faster than others. How grateful we are for the days on which the sun shines.

I think what I am trying to say is that chemotherapy should not be stigmatized as the easy answer with which to turn away the questions, fears and anguish of the declining patient and her family. Chemotherapy should rightly stand as *one* of the measures that *sometimes* can be employed in the treatment of incurable or recurrent cancer—*one* of the measures that may reestablish the continuity of the biologic barricade.

Again, let me say:

1. Chemotherapy is not a "cure" for the condition we are discussing.

2. Chemotherapy is not applicable to most incurable malignancies.

3. Many patients, because of their general physical condition, are not candidates for such treatment.

4. *Chemotherapy must be explained to the patient as a possible means of buying time and/or comfort.* It is best explained as a move toward the reestablishment of an intact barricade between patient and cancer—*for an unknown period of time!* The patient must also know that in many cases chemotherapy is ineffective, and that the drugs themselves may produce disagreeable side effects.

5. Chemotherapy is *not* experimental. Only the interaction of any particular tumor and host is unpredictable. Since no yardstick or sensitivity test is available, the physician needs must use his wits.

6. Chemotherapy can and should be discon-

tinued for reasons other than intolerance to the drug. If this modality of treatment is shown ineffective in any case, it should not be continued as a form of suggestive therapy. There are others.

7. Hopefully, chemotherapy should not worsen the situation of a sick patient.

8. In conclusion, the deepest and often the unspoken dread of the cancer patient is that friends, family or physician may abandon him or her. Chemotherapy may represent one of the outward evidences of the physician's continued concern. If the measures are effective, true hope follows and lingers. Strive for time when the days are good; settle for comfort when the days no longer have any pleasure in them.

I like to think that medicine remains an art. If the physician cannot discuss the pros and cons of *any* form of therapy with his patient, and yet leave intact some sense of hope, agreeable candor, a very real empathy, a feeling of equanimity and a bond that is not quite like any other, then indeed is art fallen.

My grandfather was a country doctor. I have his saddlebags, and I remember his surrey, his big boots and the sun dial in his garden. Around the edge of the dial were these words: "I count no hours, save the shining ones." Is it possible that we, as physicians, may occasionally be able to make the sun stand still, if only for a little while?

—TOM D. THROCKMORTON, M.D.

AMA Posture on Public Comment

Report on the AMA Board of Trustees to the AMA House of Delegates, San Francisco meeting, June 16-20, 1968

The Board is cognizant of the great increase in attention being given in the press and broadcast media to medicine and health care. Our profession is now the focus of one of America's greatest interests. It will constantly be in the spotlight, ending the professional reticence and privacy in which medicine functioned most of the time in the past.

Even though this interest is a tribute to the importance of medicine and the public's desire for its benefits, it brings with it the problems facing any person or organization with a key public position: much of the coverage is critical or displays a lack of understanding.

The Board of Trustees has consulted with AMA staff and public relations counsel on this increasingly important situation. The conclusions that have resulted from this intensive and thoughtful consideration are submitted now:

1. When statements about medicine are misguided or unfair, corrective statements will be issued promptly when the facts are available and an orderly response is possible.

2. We must recognize that the prominence and complexity of medicine in the United States today result in many limitations. Medicine is a constant subject of news and comment, much of which cannot be subject to a later response. Often our replies cannot be carried by the broadcast medium or publication, or at best will be much less prominent than the original coverage. Quite often a responsible statement cannot be issued until the facts have been obtained, and these may be scattered about the country or involve a local situation or require a great deal of time.

3. The frequency and complexity of these matters have increasingly diverted the officers and staff of AMA to reacting to what others do and say. This decreases the ability to work on constructive, ongoing activities that are vital to our future.

4. Staff is developing in written form the best possible anticipatory statements regarding all foreseeable circumstances. By having such matters thought out and documented when a need arises, we will be able to reduce the instances of surprise, decrease the time required for response, and assure consistency in AMA statements on these matters.

5. We will concentrate on building a positive posture by getting understanding for medicine's functions and its positions on various considerations; and by educating the press, broadcasters and opinion leaders. This will help forestall much misguided criticism and build a favorable climate that will inoculate against susceptibility to unfair criticism.

6. All state and county medical societies are urged to follow these same procedures.

You will see many instances in which AMA responds to public comment, many in which we have acted but our effectiveness will be in correcting the source and may not be visible immediately, and instances when judgment indicates a response should not be made. In each case the best judgment and skills will have been applied to the complexities of the situation.

Medical Aspects of Project Head Start in Iowa

Project Head Start, now in its fourth full year of operation, represents a comprehensive approach to enable preschool children and their families to secure needed educational, medical, nutritional, psychological, dental, and social services. The programs are community efforts, supported by federal funding under the Office of Economic Opportunity and administered in most instances by ongoing community organizations such as Community Action Agencies, churches, and school boards.

In November, 1967, the American Academy of Pediatrics and the Office of Economic Opportunity joined in a contract for the American Academy of Pediatrics to provide consultative services to regional and local Head Start programs. The pediatrician-consultants have been selected on a voluntary basis and most have been assigned to three or four Community Action Agencies; each agency has from one to a number of Head Start projects under its guidance. Some Community Action Agencies serve only parts of a single county; however others serve as many as six or seven counties.

Because of the need to provide coordinated health programs in the variety of communities being served by one Community Action Agency, the pediatrician-consultant serves as an adviser consultant to assist in the organization of health programs. In a recent interview Robert Mendelsohn, M.D., director of the Medical Consultation Services for the American Academy of Pediatrics, stated, "The primary responsibility of the consultant will be as an organizer. He'll have to put together those ingredients which make up a good health program. He already knows *what* constitutes a good program so he has to put them together and this means application of available resources. In his role of consultant, he'll be using his voice and his pen, not his stethoscope."

As president of the Iowa Chapter of the American Academy of Pediatrics William McCormack, M.D., of Ames, has said "I want specifically to emphasize that the pediatrician-consultants are consultants to the local programs and are not in any way there to provide physical examinations or treatment to the children in these programs. They will be of service to the local Head Start medical doctor by assisting him in obtaining the highest quality medical care and programs for children that would be possible insofar as local conditions permit."

Currently there are 10 physicians serving as pediatrician consultants in Iowa. Their names and the agencies they are serving are:

Consultant	*Project*
Leonard Gangeness, M.D. Des Moines	Mid Iowa Community Action, Inc., Nevada Pottawattamie Co. C.A.P. Southwest Iowa Progress, Inc., Council Bluffs
James Boysen, M.D. Sioux City	Mid Sioux Opportunity, Inc., Remsen SOLO Community Action Association, Rock Rapids Upper Des Moines Opportunity, Emmetsburg
Alfred Healy, M.D. Iowa City	North Iowa Community Action Organization, Mason City Black Hawk Co. CAC, Waterloo Northeast Iowa Community Action Corp., Decorah
Paul Koellner, M.D. Ames	Sioux City Community School District, Sioux City Polk County CAC, Des Moines Council of Community Services, Sioux City
David L. Silber, M.D. Iowa City	Dubuque Area Economic Opportunity Agency, Dubuque
William Jackson, M.D. Sioux City	West Central Devel. Corporation, Harlan Your Own United Resources, Inc., Fort Dodge Community Opportunities, Inc., Carroll
Austin Sharp, M.D. St. Louis	Hawkeye Area Community Action Program, Iowa City Scott Co. Economic Opport. Council, Davenport Clinton Jackson Community Action Org., Clinton
George Baker, M.D. Iowa City	Iowa East Central TRAIN, Muscatine Southeast Iowa Community Action Org., Burlington
Calvin Woodruff, M.D. Columbia, Missouri	Matura Action Corporation, Creston, Grinnell
Walter M. Block, M.D. Cedar Rapids	Linn Economic Action Program, Cedar Rapids

Report of Iowa Blue Shield Annual Meeting

July 28, 1968

Election Results

	Term Expires
John C. Peterson, M.D.—District 3 (Calhoun, Clay, Dickinson, Emmet, Lyon, O'Brien, Osceola, Pocahontas and Sioux Counties)	1971
Arthur W. Devine, M.D.—District 6 (Benton, Black Hawk, Grundy, Hardin, Iowa, Jasper, Marshall, Poweshiek and Tama Counties)	1971
John R. Scheibe, M.D.—District 9 (Appanoose, Davis, Keokuk, Lucas, Mahaska, Monroe, Marion, Wapello and Wayne Counties)	1971
Samuel P. Leinbach, M.D.—Physician member-at-large	1969
C. E. Radcliffe, M.D.—Physician member-at-large	1969
George H. Scanlon, M.D.—Physician member-at-large	1969
C. V. Edwards, Sr., M.D.—Physician member-at-large	1971
James J. Redmond, M.D.—Physician member-at-large	1971
Mr. L. Call Dickinson, Jr.—Lay member	1971
Mr. Harris Feldick—Lay member	1971

President's Report

In reviewing Blue Shield's activites of the past year (18 months), I find that in many areas we have anticipated the request of the president of the National Association of Blue Shield Plans, in his 1968 report, when he stated: "It is time to put our house in order."

In some areas we have passed the planning stage into the refinement stage, such as Medicare. In other areas we are still in the planning or reacting stage. An example of the reacting stage is the sudden mountainous increase in Title XIX claims. This required:

1. Increases in personnel, who required training that only we could supply.
2. New claim-processing methods.
3. New equipment, which was difficult to obtain.
4. Time to regulate this equipment, and time to train the personnel to operate the equipment.

During this time Blue Shield's personnel increased, and now we have 217 employees.

In addition to all this new workload, our regular Blue Shield business continued to increase, requiring new working techniques.

Blue Shield contracts during 1967 increased from 357,212 to 377,000, or by a total of approximately 19,800 new contracts.

Iowa Blue Shield was rewarded at the 1967 National Enrollment Conference with a plaque from the National Association of Blue Shield Plans for achieving the largest net gain in enrolled contracts of all Category 2 Blue Shield Plans. This is the first time Iowa Blue Shield has been accorded that honor.

Our membership increased from 801,700 to 839,-116, for a total increase of about 37,000 members. During the first six months of 1968 our enrollment increased by an additional 25,937 members, to a total of 865,053.

During the period from January 1 to May 31, 1968, Blue Shield received 266,109 claims and processed 274,573 claims. Blue Shield processes a daily average of 2,500 claims and pays out daily an average of $85,803.

MEDICARE PART B

The processing of Medicare Part B is now on what can be considered a current status. However such was not always the case.

Early in 1967 Iowa Blue Shield Plan ranked from 24th to 27th among the 33 Plans acting as Medicare B carriers in processing these claims. We were on a manual system, with only a small portion of the operation on a computer. Due to a massive effort in our office, the claim count was reduced to approximately 46,000 claims in processing at the end of December, 1967. In order to eliminate this backlog, there were many hours of overtime, plus a new program of computer operation. We also purchased the services of a consulting firm to help us in establishing a good ongoing system. As a result of all of these efforts, the claims count at the end of June was slightly under 30,000, and on the May report from National Blue Shield we ranked 11th among the 33 Plans.

During 1967, payments were provided on 367,-354 claims, with a total dollar outlay of $16,179,-054. On March 22 we received a letter from the H.E.W. Department saying: "We have reviewed your performance over the past year and have noted the marked improvement which your workload figures indicate you have achieved over the past several months. This is to advise you that we wish to renew our agreement for a third contract year."

As I mentioned before, we now have under 30,000 claims in process. Those constitute approximately 12 work days of claims.

TITLE XIX

As you all know from reading the newspapers, there has been some difficulty in processing claims under Title XIX (Medicaid). This program began in July, 1967, with very few months of lead-in time. Actually it was not until November, 1967, that the State Department of Social Welfare provided Blue

Cross and Blue Shield with a workable eligibility tape.

Under this program, Blue Cross and Blue Shield process claims determining benefits payable. It is the responsibility of the State Department of Social Welfare, along with the county departments, to determine eligibility for the program. Granted, we had many internal difficulties in processing claims under a new program such as this; however many problems were also apparent in the state and county operations.

One of the larger problems we had consisted of the older claims which could not be paid because the state eligibility tapes did not contain information for the people concerned. On many occasions we were told by the state that we should hold these claims, and that evidence of the beneficiaries' eligibility would show up in due time. Following the rash of newspaper articles on Title XIX, all claims for which eligibility remained undetermined were returned to the state. Claims for which eligibility cannot be determined are now returned to the state on a daily basis, and we are receiving a steady flow of hand-processed eligibility information.

Our processing system is now running more smoothly, and only recently a new contract was signed for the year extending from July 1, 1968, through June 30, 1969.

In 1967 a total of 153,433 claims were paid under this program, with a total dollar amount of $3,683,477. In the first five months of 1968, a total of 390,748 claims were processed for payment. That was an average of 3,552 claims per day and an average daily payment of $87,744.

THE BLUE SHIELD—IOWA MEDICAL SOCIETY RELATIONSHIP

The past year saw a continuation of closer cooperation and working arrangements with the Iowa Medical Society and its Board of Trustees and Executive Council. This has been evidenced in many ways:

1. By the fact that for the first time in many years there were no resolutions on Blue Shield activities presented at the Iowa Medical Society's annual meeting.

2. By a fine report presented at that meeting by the Blue Shield Reference Committee, commending the officers, boards and staffs of both organizations for their spirit of cooperation and trust.

3. By an almost complete absence of opposition to the proposals outlined by the Board of Trustees on the proposed new Blue Shield contracts.

4. By the statement in the aforementioned report of the Blue Shield Reference Committee: "The report [of the Board of Trustees] clearly sets forth the manner in which proposed contract modifications and other matters have been reviewed with the Iowa Medical Society in keeping with past actions of the Iowa Medical Society House of Delegates."

A brief outline of the steps that are required in developing new contracts may show why there is a considerable time lapse between the inception of the idea and the actual marketing of the product:

1. An idea must develop through changes in medical practice, board action, or a necessity to improve.

2. The Board of Directors of Blue Shield must be cognizant of this idea and must give the Blue Shield staff some direction.

3. A great many hours of staff time is spent in developing the actual benefit to be presented and the wording to be used in the contract. Costs of the benefit must be ascertained and a premium structure developed. The marketing potential is investigated, and marketing techniques begin to develop.

4. Preliminary contract language is presented to the Blue Shield Board and to the Iowa Medical Society.

5. Final contract language is written and again presented to the Iowa Medical Society and finally to the Blue Shield Board for approval.

6. The pertinent points in the contract are presented to the Iowa Medical Society House of Delegates.

7. Final approval is given by the Blue Shield Board of Directors.

8. Approval of the insurance commissioner is obtained.

A wee bit cautious? We could look at this precaution in various ways: (1) that there still is no trust in the policy-making body of Blue Shield; or (2) that it is one more step to take to prove that we have the public, physicians and Blue Shield in mind when we make benefit changes.

I think the latter would be the thinking of most. Blue Shield and the Iowa Medical Society must work together; we must support each other if we are to survive.

BENEFIT PATTERNS

The scope of benefits in our contracts has increased rapidly in the past 18 months. These changes are needed to meet the pressures and demands of today from the public, from our commercial competition and from Medicare and previous requests of the Iowa Medical Society House of Delegates, and should (1) discourage overhospitalization; (2) encourage outpatient and private-office practice for diagnosis and therapy; and (3) demonstrate our continued interest in providing the best possible prepaid medical care available.

New Blue Shield coverages which followed the long hard road beginning in the latter part of 1967 and continued through the last IMS House of Delegates meeting include:

1. *Extended Care Facility Coverage.* This was added to all basic certificates without a rate adjustment, only for those under 65.

2. *Extended Complementary 65 (Comprehensive*

65). This contract was offered for sale from June 15 to July 15, 1968. This contract is designed to pay for the same services paid by Medicare, except blood. This will eliminate much of the confusion as to the exact services covered under the original Medicare Complementary Program.

3. *Usual, Customary and Reasonable Certificate.* This certificate was designed to eliminate the discrimination against the subscriber who utilizes the services of a non-participating or out-of-state physician. This contract will pay the usual, customary and reasonable fee of every physician regardless of whether or not he participates with Blue Shield. This contract has not yet been approved by the insurance commissioner.

Four new riders for basic certificates include:

A. *Home, Office and Outpatient Medical Services.* Usual and customary fees are paid, for accidental-injury cases, beginning with the first day. The state of coverage in cases of illness, as distinguished from accidental injury, varies in individual contracts.

B. *Outpatient Diagnostic X-Ray and Laboratory.* The rider is for diagnostic outpatient coverage, and is designed to discourage patients from requesting hospitalization. The previous arguments regarding possible overutilization of this coverage still hold true. Care in the presentation of the program, plus diligent and strong utilization review, will be necessary.

C. *Outpatient Physical Therapy.* This new addition will also require close observation to prevent overutilization.

D. *Outpatient Vaccinations, Immunizations and Injections.* The types of injections will be definitely spelled out in all contracts.

BLUE SHIELD AND BLUE CROSS

In May, 1968, the executive committees of Blue Cross and Blue Shield, in a joint meeting, voted acceptance of a new and revised joint operating agreement. It contained one new provision, a Joint Liaison Committee was to be formed, consisting of three members from each Board. The Committee members are to be appointed by the chairmen of the respective boards.

FINANCE COMMITTEE

One example which the president of the National Association of Blue Shield Plans used in outlining how we should "put our house in order" was: "We must harness the knowledge and expertise of a new generation of technical experts."

The Finance Committee, which was appointed following the 1967 annual meeting, reviewed the past policies and procedures concerning the management of the investments of the Corporation, and requested authority to establish new policies and procedures in the management of the corporate investments.

The Committee was granted authority to invest a small percentage of the Corporation's reserves in common stocks each year. Following the success of the first investments in this field, the Committee was granted permission to increase the common-stock investments up to 15 per cent of the total portfolio.

Following its report at the May 16 Board meeting, the Board of Directors voted to commend the Finance Committee for its fine efforts and continuous work regarding the investments of Iowa Medical Service.

FINANCIAL REPORT

The following figures compare the year 1966 with the year 1967:

Our *income* increased from $19.6 million to $21.5 million, for a total increase of $1.8 million.

Payment of claims showed an increase of $1.8 million, from $17 million to $19 million.

Excess of Income Over Doctors' Allowances: A $17,280 increase, from $2,547,000 to $2,564,000.

Operating Expenses: An increase of $180,000, to $2,185,000.

As the result of a technical readjustment of prior years' adjustments, *our net income* showed a decrease of $202,500. *Our reserves* as of December 31, 1967, showed an increase of $800,000.

NEW DEPARTMENTS

Field Service. Early in 1968, in a continuing effort to give better service to participating physicians, plans were completed for coordination of the efforts of the Iowa Medical Society's Field Service personnel and Blue Shield's Physicians Relations representatives.

This joint coordination of effort was designed to improve the close liaison and communications between the two organizations and the providers of health care. Mr. Eldon Huston, assistant executive vice-president of the Iowa Medical Society, and for six months of this year assistant executive director of Blue Shield, will be coordinator for this new joint force.

Quality Assurance. In the coming years, the providers of health care and the mechanism involved in financing it will come under continuous scrutiny.

We have a heavy responsibility to account to private business, government agencies, our subscribers and to the medical profession that Blue Shield possesses the ability to determine usual and customary charges in an effective and uniform way. In our endeavor to develop a sound fiscal program, a new department, Quality Assurance, was established early in 1968. This department is designed to act as a medium through which a regular, continuing and systematic review can be made of the funds disbursed on behalf of the recipients of care.

Subscribers Service. This department began operation in February. This area, equipped with all modern devices and staffed by carefully-selected

and well-trained personnel, handles all inquiries, walk-ins, telephone calls and correspondence regarding claims, contracts or premiums. At the present time all calls from physicians are handled by this department.

Physicians Service Center. In the near future all inquiries from physicians will be directed to this new Physicians Service Center, where we anticipate stationing several well-qualified individuals to provide information promptly and accurately. This department will begin operation in the fall of this year.

Artificial Lung for the Newborn

Long-term maintenance of blood-oxygen levels in newborn infants suffering from respiratory distress syndrome may soon become a practical clinical reality with a new artificial lung developed by scientists in the National Heart Institute, a component of the National Institutes of Health. The NHI scientists, and collaborating scientists in Boston, Chicago, and Baltimore report their use of the highly efficient and disposable membrane lung to safely maintain adequate blood oxygen levels in newborn lambs during continuous use for periods of up to 4 days (96 hours). These findings have just been published in TRANSACTIONS OF THE AMERICAN SOCIETY FOR ARTIFICIAL INTERNAL ORGANS, by Drs. Theodor Kolobow and Warren M. Zapol of the NHI's Laboratory of Technical Development, Joseph E. Pierce, NHI Laboratory of Kidney and Electrolyte Metabolism, Ambrose F. Keeley, Boston City Hospital, Robert L. Replogle, University of Chicago Medical School, and J. Alex Haller, Johns Hopkins University School of Medicine.

Heretofore, prolonged blood-oxygenation with an artificial lung has been limited in duration to less than 12 hours in newborn laboratory animals, and has been accompanied by severe damage to lungs, blood cells and blood proteins, as well as the formation of dangerous blood clots and air bubbles in the blood.

The cylindrical, pint-sized lung, called the "spiral coil membrane lung," contains a thin (5/1000 inch) silicone rubber membrane formed into a flat tube or envelope that is wound about a central spool. The envelope is fitted with oxygen inlet and outlet ports. Blood enters one end of the lung's cylindrical housing, flows between layers of the spirally-wound silicone envelope and, still flowing parallel to the cylinder's axis, exits at the other end. As in other membrane lungs, blood oxygen and carbon dioxide exchange occurs by diffusion across a membrane. However, unlike most membrane lungs, the spiral coil lung is suction-actuated, i.e., oxygen is pulled through the lung by the intermittent application of a slight vacuum to the oxygen outlet port.

The new lung owes most of its safety advantages as well as its high oxygenating efficiency to this gentle, cyclic application of negative pressure, as it prevents oxygen bubbles from entering the blood (gas emboli) should pin hole leaks occur in the membrane, and the pulsatile motion it imparts to the membrane greatly increases blood oxygenation by eliminating the "stagnant" boundary layer of oxygen-saturated blood immediately adjacent to the membrane. Thus, more blood is brought into contact with the membrane where oxygenation occurs. Finally, the low perfusion pressure and pulsatile motion, along with normal arterial blood pressure, act to propel blood through the lung and eliminate the need for a separate blood pump with its attendant damage to fragile blood components.

Performance of the spiral coil lung was studied during prolonged use in eight newborn lambs (from one to eight days old), each connected to an externally located spiral coil lung by means of plastic tubing inserted into an artery and a vein in the neck. Lambs were chosen for these studies because they weigh about the same as newborn infants. In these studies, oxygenating efficiency of the artificial lungs was determined daily during brief periods of oxygen lack when the lambs were subjected to an atmosphere containing only 7 per cent oxygen.

The NHI and collaborating scientists report that the artificial lungs performed well during continuous operation in the animals for periods of from 21 to 96 hours, and that no consistently abnormal gross or microscopic changes occurred in the 6 survivors.

From this excellent performance of the spiral coil lung, and the overall benign affects of its prolonged use in animals, the scientists feel that its use should be considered as a method of treating respiratory distress in the newborn infant or adult. The spiral coil lung can oxygenate up to 450 cc. of blood (nearly a pint) per minute, yet has a total priming volume of only 45 cc.


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Iowa Chapter of the American Academy of General Practice

Twentieth Annual Meeting and Scientific Assembly

Hotel Savery, Des Moines, October 21-22, 1968

(12 hrs. AAGP Credit)

Monday, October 21

8:15 a.m. Movie: "Chronic Cor Pulmonale in the Emphysematous Patient"
9:00 a.m. "New Developments in Immunology"—John L. Gedgoud, M.D., Omaha
9:30 a.m. "Treatment of Psoriasis"—Christian E. Radcliffe, M.D., Iowa City
10:45 a.m. "Iowa Medical Foundation Loans for GP's"—George H. Scanlon, M.D., Iowa City
11:15 a.m. "Immediate Management of Life-Threatening Situations"—R. L. Lawton, M.D., Iowa City
11:45 a.m. QUESTION AND ANSWER PANEL
12:15 p.m. ANNUAL MEETING LUNCHEON—REPORTS; ELECTION OF OFFICERS
2:00 p.m. "Sinusitis in Infants and Children"—Dr. Gedgoud
2:30 p.m. "How to Run Your Handy Hyfrecator for Fun and Profit"—Dr. Radcliffe
3:00 p.m. "Chemotherapeutic Cancericidal Agents"—Dr. Lawton
4:00 p.m. "Thyroid Disease—Diagnosis and Medical Management"—Robert Heaney, M.D., Omaha
4:45 p.m. QUESTION AND ANSWER PANEL
6:00 p.m. SOCIAL HOUR AND BANQUET
LAS VEGAS IN DES MOINES (Each couple will be given a generous amount of play money that they can use in playing many games of chance. Afterward they can use their winnings at an auction of highly desirable merchandise. This type of entertainment has the approval of the Des Moines authorities.)

Tuesday, October 22

8:15 a.m. Movie: "Osteoporosis of the Aging"
9:00 a.m. "Pediatric Emergencies"—Gordon E. Gibbs, M.D., Omaha
9:30 a.m. "Quo Vadis, Femininis—the Changing Pattern of American Women"—Kermit E. Krantz, M.D., Kansas City
10:45 a.m. "New Antibiotics"—Ian M. Smith, M.D., Iowa City
11:15 a.m. "Juvenile Diabetes"—Dr. Gibbs
11:45 a.m. "To Bleed or Not to Bleed—Menopause and Estrogens"—Dr. Krantz
12:15 p.m. QUESTION AND ANSWER PANEL
12:30 p.m. "AAGP Group Disability Plans"—Mr. Donald Schnure
12:35 p.m. LUNCHEON
"Sex in the Doctor's Family"—Beverly T. Mead, M.D.
2:00 p.m. The Ernest E. Shaw Memorial Lecture: "Rheumatoid Arthritis"—John J. Calabro, M.D., Los Angeles
2:45 p.m. "Pseudomonas Infections"—Dr. Smith
3:45 p.m. "Frigidity and Impotence"—Dr. Mead
4:30 p.m. QUESTION AND ANSWER PANEL

Otolaryngology for the General Practitioner

Iowa City, October 11-12

(Registration fee $25; AAGP credit 6 hrs.)

Friday, October 11, 1968

9:10 a.m. "What's New in Otolaryngology at The University of Iowa"—Dr. McCabe
9:30 a.m. "Office Procedures—Myringotomy, Incision and Drainage of Tonsil Abscess, Salivary Stones, Examination of Larynx, Tympanic Tubes, and Antral Irrigation"—Ward B. Litton, M.D.
10:15 a.m. "Dizziness"—Kent K. Gillingham, M.D.
11:00 a.m. "Doc—I've Got Sinus"—Dr. McCabe
11:30 a.m. "Detection of Hearing Loss in Pre-School Children"—Charles V. Anderson, Ph.D.
11:50 a.m. "Speech Problems in Hard of Hearing Children"—Jeanne K. Smith, M.A.
12:10 p.m. LUNCHEON, Doctors' Dining Room
1:15 p.m. "Ear Infections"—Charles J. Krause, M.D.
1:35 p.m. "Assessment of Facial Injuries; Reduction of Nasal Fracture"—Leslie Bernstein, M.D.
2:00 p.m. "Detection and Treatment of Head and Neck Neoplasms"—James R. Leonard, M.D.
3:00 p.m. "Dental Problems for the General Practitioner"—James W. Schweiger, D.D.S.
3:20 p.m. "Cleft Palate Problems"—Hughlett Morris, Ph.D., and William H. Olin, D.D.S.
4:00 p.m. PROBLEM CLINIC—Question and Answer Session—Dr. Leonard and Staff

(Registrants who wish tickets for the Iowa-Indiana football game, which is to be played in Iowa City on October 12, must send their orders no later than October 1, and enclose $5.50 for each football ticket.)

Iowa Association of Medical Assistants

It Can Happen!

Where the benefits are worth the effort, education-wise, there you will find dedicated medical assistants who have resisted the beckoning of a peaceful weekend on the patio or on the beach to attend a concentrated course and receive vital information that will increase their overall efficiency in the medical office.

This did happen! One hundred six medical assistants registered at the Ramada Inn near Iowa City, on July 20, 1968, for a six-section study session. The topics were varied, including public health nursing, home services, Social Security, professional management, Medicare, Title XIX and office-hospital communications. Professional instructors in all those subjects not only praised the medical assistants for their efforts, but declared that they, too, had gained much from the meeting. Thus communications were improved in both directions.

Regarding public health nursing and home services, the assistant-students learned of the many ways in which patients can be provided medical care and other essential services in their homes. These are very important today, since our senior citizens need home care and wish to remain in their homes. Not only the aged but also many children, temporarily in a motherless home, need home care. Once the medical assistant knows the availability of such assistance, she can help her employer by cataloging the essential information for immediate reference. Public-health nursing has much to offer, and the source of this type of help should be placed on the list.

The section on Social Security emphasized the necessity of helping Medicare patients understand the health benefits to which they are entitled. Often the medical assistant forgets that the staff in the Social Welfare office consists of people just like herself, and have no less a desire to improve communications between physicians and their office. It is hard to realize that today there are people depending solely on Social Security for their livelihood. If Social Security premiums had not been withheld during their working years, would they have put aside enough to permit their living even as well as they do today? This was food for thought.

The section on professional management stressed the fact that at all times we must be our employers' "ambassadors in the outer office"—walking, talking embodiments of good public relations! We must maintain a positive attitude in everything we do; must be well-informed; must be masters of tact; and must be students of psychology. And our attitude must be the professional one of seeking to do what is best for the patient, as we help him or her to maintain a good financial arrangement.

In the workshop on Medicare the medical assistants were given a set of true-or-false questions as a means of provoking a two-way discussion of the subject. In consequence the medical assistants explained their individual situations and asked for help. Title XIX, like Medicare, was discussed similarly. Much literature was available, recent changes were reported, and instruction was offered.

Office-hospital communications is a highly important topic, and one that has been sadly neglected in previous training sessions. How trifling the difficulties seemed, once the assistants knew what information the hospitals wanted them to provide —especially on admissions—and the speakers were similarly surprised to discover the types of information that medical assistants wished the hospitals to provide *them*, and the ways in which they thought it should be transmitted. On that subject, particularly, the briefing was two-way!

Summarizing the day's work in a critique, the speakers pointed out areas where they thought improvement could be made, and areas where their own procedures might be revised in order to help the assistants. One of the speakers said, "Your hospital should be willing to help you in this two-way communication. There is the hook-up by telephone so that the physician can dictate additions to medical records, and the hospital switchboard records the physician's presence in the hospital. Do you provide the hospital with the physician's vacation schedule? his call list? the name of the physician who is to cover for him while he is out of town? If not, hospital personnel can waste a lot of time, and patients can be caused a great deal of mental trauma." Concluding his remarks, the speaker said, "You are to be congratulated for making efforts such as this to continue your education. It is important in your work. The University of Iowa recently lost a great teacher and investigator, Dr. Wendell Johnson, one of the world's foremost authorities on language behavior

(Continued on page 976)



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The first nationwide medical television service, NCME—The Network for Continuing Medical Education—brings you visually the important achievements of leading medical authorities. By means of closed-circuit television, this independent network provides your hospital or medical school with a complete videotape service that helps shorten the gap between new medical knowledge and its availability for clinical or teaching purposes.

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☐ To help your institution make effective use of closed-circuit television, NCME offers a wide range of services and utilization aids, including: Technical consultation in setting up a closed-circuit system; advance program information on the contents of each telecast; display units to help publicize programs; expense-paid seminars to improve utilization of medical television.

☐ NCME programs are brief and may be shown as often as desired; you can view the telecasts at times that are most convenient, without disrupting your normal schedule.

☐ Frequently NCME makes available published papers related to subjects presented on closed-circuit television.

A recent NCME hospital telecast presented Philip N. Sawyer, M.D., Professor of Surgery and Head of the Vascular Surgical Service at Downstate Medical Center, Brooklyn, N.Y., in a demonstration and evaluation of "Gas Endarterectomy."

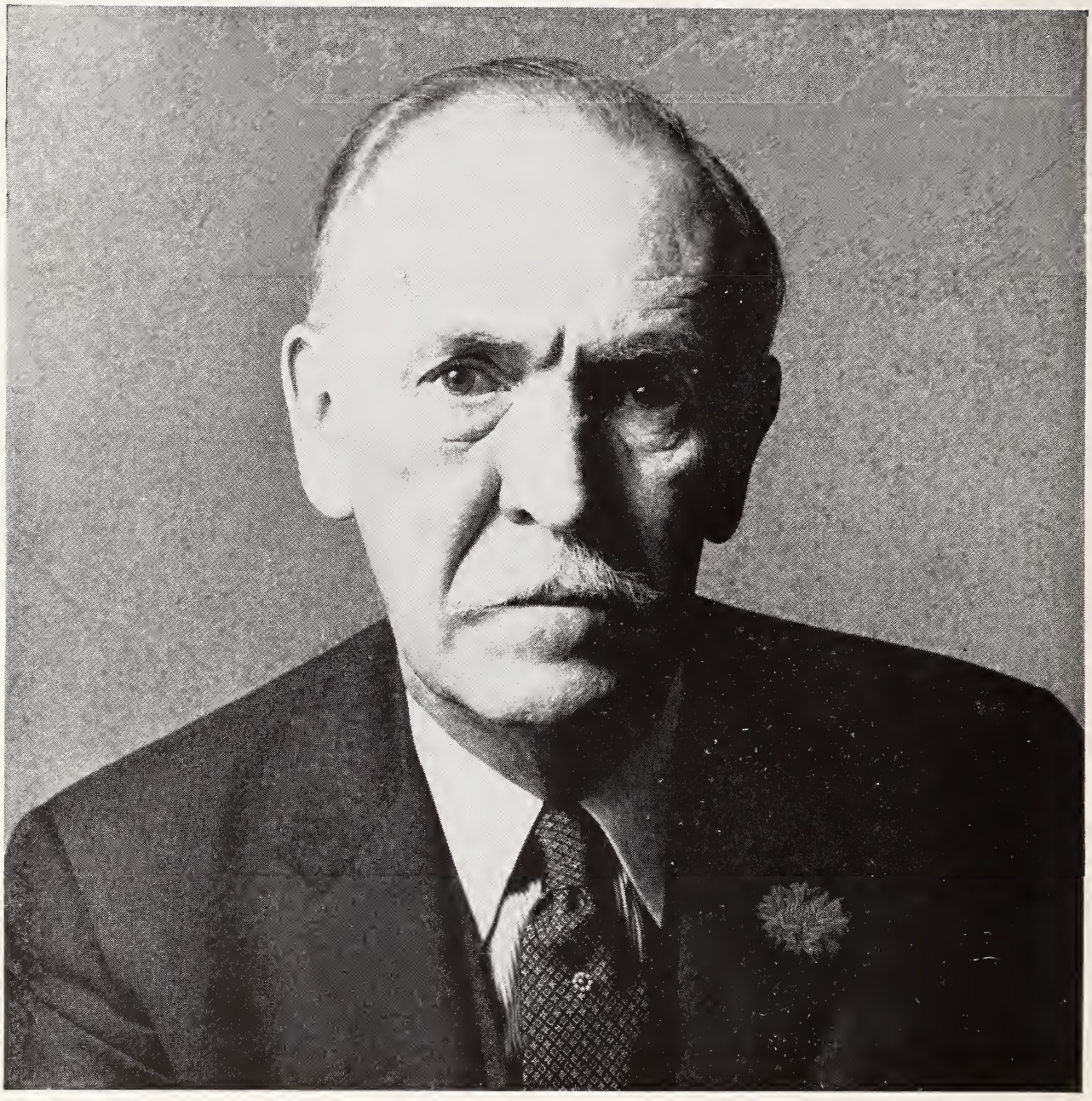
In this program, Dr. Sawyer performs the operation on a patient with gross occlusion of the right iliac, femoral and popliteal arteries.

In Dr. Sawyer's view, gas endarterectomy has several advantages over mechanical methods: the operation can be completed faster, causes less damage to the arteries and offers a more successful outcome.

NCME is an independent network supported by Roche Laboratories to increase the use of closed-circuit TV for medical education under direct hospital and school control.

If your hospital or school does not participate in the biweekly NCME program, information on the cost-free service may be obtained by writing to NCME, 342 Madison Avenue New York, N.Y. 10017

Help the Needy!



A patient of advancing years may appear to "have everything," but may well be in need—*medically*. You know the symptoms. He's tired most of the time. Though there's nothing wrong with him organically, he suffers from general malaise. Lassitude has become his way of life . . . vague aches and pains his major concern.

Such a patient has entered the "Mediatric Age"—that stage of his life in which he's an ideal candidate for MEDIATRIC. This preparation provides the anabolic benefits of gonadal steroids, plus a gentle mood uplift and the nutritional support he's apt to need. MEDIATRIC is intended to help keep him more alert and active, and relieve general malaise . . . to help restore that sense of physical and emotional well-being that the elderly *deserve* to enjoy.

The estrogen component in MEDIATRIC is PREMARIN® (conjugated estrogens-equine), the orally active, natural estrogen so widely prescribed for its physiologic and metabolic benefits. The combination of estrogen and *methyltestosterone* can help maintain anabolic balance to forestall premature degenerative changes related to estrogen deficiency. MEDIATRIC also supplies a small amount of *methamphetamine HCl* to provide a gentle mood uplift, and nutritional supplements specially selected to meet the needs of the aging.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.
WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.
SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.
SUGGESTED DOSAGES: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.
In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.
SUPPLIED: No. 752—MEDIATRIC Tablets, in bottles of 100 and 1,000.
No. 252—MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.
No. 910—MEDIATRIC Liquid, in bottles of 16 fluidounces.

	Each MEDIATRIC Tablet or Capsule contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC Liquid contains:
Conjugated estrogens-equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
Pyridoxine HCl	3.0 mg.	—
Calcium pantothenate	20.0 mg.	—
Ferrous sulfate exsiccated	30.0 mg.	—
Ascorbic acid	100.0 mg.	—
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President's Page



The statements contained on the opposite page are particularly appropriate at this time with national and local elections approaching.

I sincerely feel that it is the duty of every responsible citizen to examine the issues involved in all elections and to support the candidates who most agree with his philosophy.

I urge the physicians of Iowa to evaluate the candidates carefully to make sure where they stand relative to medicine's problems, and to support them financially and at the polls.

Our professional freedom will not be taken away; we shall lose it by default.

C. W. Scheibert, M.D.

President

INFORMATION FROM THE
IOWA HEART ASSOCIATION

Emergency Treatment of Acute Pulmonary Edema

PHILIP SAMET, M.D.
Coral Gables, Florida

Acute pulmonary edema is a common, dramatic and often catastrophic event in the life history of the cardiac patient. It is primarily an expression of disease of the left side of the heart and is therefore seen in patients with acute myocardial infarction, mitral valve disease especially mitral stenosis, aortic stenosis, aortic regurgitation or severe hypertension, and occasionally in individuals with rapid tachycardias or pulmonary embolism. Rarer types of pulmonary edema include high-altitude pulmonary edema, pulmonary edema following near-drowning or exposure to noxious gases, and pulmonary edema associated with acute renal insufficiency with overhydration. On rare occasions pulmonary edema has been associated with neurological disease, including trauma and intracerebral hemorrhage.

In the previously untreated patient, the cornerstones of treatment of acute pulmonary edema are:

1. sedation, usually with morphine
2. improvement of myocardial function by digitalization
3. onset of rapid diuresis with the newer diuretic agents
4. decreasing venous return and right ventricular output
5. removal of precipitating and aggravating factors such as tachy-arrhythmias, paroxysmal hypertension, arterial hypoxemia, metabolic or respiratory acidosis, and increased work of breathing.
6. proper positioning of the patient.

The above therapeutic measures are most often used concurrently rather than consecutively, especially if the pulmonary edema is severe. Formerly, discussion often centered about the question of whether morphine or digitalis was the most important form of therapy in acute pulmonary edema. The development of the newer diuretic agents such as ethacrynic acid and furosemide has added another primary form of treatment for this condition. Generally, all three agents are administered early in the course of therapy for severe pulmonary edema, in addition to placing the patient in the upright position unless shock is present.

The author is a staff member in the Section of Cardiology, Department of Internal Medicine, Mount Sinai Hospital of Greater Miami, Miami Beach, and of the University of Miami School of Medicine, Coral Gables.

Morphine is best injected intravenously, over a 2- to 3-minute interval, in a dose of 8-10 mg. If necessary, an additional 5-10 mg. may be given one-half hour later. In mild cases the drug may be given subcutaneously or intramuscularly. Morphine therapy alone will often terminate the mild case of pulmonary edema. If respiratory depression results from morphine administration, nalorphine hydrochloride (Nalline) should be given intravenously in 5 mg. doses, and they may be repeated once or twice at 20-30 minute intervals. Morphine should be avoided in patients with histories of allergic asthma or chronic pulmonary disease, especially if the arterial carbon dioxide tension (pCO_2) exceeds 45-48 mm. Hg. Pulmonary edema in patients with cerebrovascular trauma or accidents should also be treated without morphine. Morphine therapy may result in varying degrees of hypotension, which may in turn require therapy.

Improvement of myocardial contractility by means of digitalis is a second foundation of therapy. Intravenous administration is generally advisable. If the situation is extremely grave and if the physician is experienced in the use of ouabain, 0.5 mg. of this glycoside is given by vein, and it is followed by further doses of 0.1 mg. every half hour to a maximum of 0.8-1.0 mg., or until clinical improvement is noted. One must be certain that the patient has *not* been receiving digitalis therapy for at least two, and preferably three weeks, if intravenous digitalis preparations are employed. Much more frequently, lanatoside C or digoxin is utilized for the rapid intravenous digitalization of patients in pulmonary edema. The action of these latter two agents starts within less than one hour when the drug is given intravenously. If digoxin is utilized, 1.0 mg. of it is given intravenously, followed by one or two 0.25 mg. doses if needed. Maintenance therapy with oral or intramuscular digoxin can then be employed.

The development of rapid-acting diuretic agents —ethacrynic acid and furosemide—has altered the therapy of acute pulmonary edema. The intravenous administration of 1-2 ml. of a mercurial diuretic was formerly advocated, but since the onset of diuresis was delayed for 4-6 hours, the issue usually was decided before an effective diuresis could take place. However administration of either ethacrynic acid or furosemide results in much more rapid diuresis. When given intravenously, either agent produces diuresis within 15-20 minutes. A liter of urine is often produced within 60-90 minutes. Oral administration produces diuresis within 60-90 minutes. Ethacrynic acid is given intravenously in doses of 50-100 mg. in pulmonary edema. Oral therapy (100 mg.) is less de-

sirable for the treatment of pulmonary edema. Furosemide has not as yet been released for intravenous administration, but it is available for oral use. Theophylline derivatives such as aminophylline (0.24-0.48 G in 20 mil. of solution and given slowly intravenously) are advocated by some clinicians, but this observer has seen little evidence of a beneficial effect unless severe bronchospasm complicates the picture of pulmonary edema. Similarly, surface tension reducing agents such as ethyl alcohol have not been of significant benefit in our hands.

Measures to decrease venous return are employed, especially when the above approaches have been ineffective or only partially effective. The primary measures in this category include rotating tourniquets and phlebotomy. Phlebotomy is accomplished by removal of 500 ml. of blood as rapidly as possible. Positive-pressure breathing may also be employed to decrease venous return. Blood pressure must be watched carefully during positive pressure breathing to prevent serious hypotension. Other measures such as spinal anesthesia and stellate ganglion blockade, have been suggested to decrease venous return, but have seen limited use. Ganglionic blocking and sympatholytic agents such as mecamylamine (1-3 mg. diluted in 50 ml. of 5 per cent glucose in water and given slowly intravenously), hexamethonium, dibenamine, and dihydroergokryptine have been employed but experience has been limited. The one situation in which these agents may be useful is in the treatment of pulmonary edema in patients with severe systemic hypertension.

The last category of therapeutic measures embodies the removal of precipitating factors. These include the correction of arrhythmias with rapid or slow ventricular rates. Arterial blood gas analysis has become an essential aspect of therapy in patients in pulmonary edema who do not readily respond to treatment. The most common acid-base abnormality detected is respiratory alkalosis, and it does not require specific therapy. Decreased peripheral perfusion due to low cardiac output is often a cause of metabolic acidosis. It requires correction with intravenous sodium bicarbonate. Occasionally, endotracheal intubation or tracheostomy is required for adequate carbon dioxide exchange. Correction or arterial hypoxemia is accomplished by inhalation of high oxygen mixtures and correction of the pulmonary edema. The role of hyperbaric chambers in correcting arterial oxygen unsaturation remains for future study. Surgical correction of aortic- and mitral-valve disease may be needed to prevent recurrent pulmonary edema. The final precipitating factors of pulmonary edema that can readily be dealt with involve restriction of activity and prevention of excessive sodium intake.

Utilization of one of the varied types of assisted circulation, such as veno-arterial shunting, left heart bypass or counterpulsation, may offer future promise for the therapy of patients with nonresponsive pulmonary edema, but the clinical value and role of these methods have not yet been determined. On the other hand, peritoneal dialysis with hypertonic glucose solution offers a more immediately available palliative procedure for a few selected patients with nonresponsive, continual pulmonary edema.

Five-Day Course on Use of Computers for Internists

The American College of Physicians (ACP) will sponsor a five-day postgraduate course on "Computers in Medicine," October 7-11 at the University of Wisconsin Medical School, Madison. The session is one of 24 postgraduate courses being held throughout the United States by the ACP during the current academic year to help specialists in internal medicine keep abreast of new knowledge affecting the diagnosis and treatment of diseases.

The course will be given in two sections. The first, under the direction of the University's Division of Computer Science, will include instruction in the nature of computer operations, programming and computer languages and tours of facilities at the university hospital, basic science laboratories and the University Computer Center. The second part of the course will be devoted to the medical applications of computers including history-taking, computer-aided physical examinations, procedures for hospital administration and patient service and the use of computers in medical education.

It Can Happen

(Continued from page 970)

and, in particular, on stuttering. He used to say, 'Everyone should listen to everybody A LITTLE,' and 'Strive to be efficient; resolve to be human!' "

The president of the Iowa Association of Medical Assistants, Mrs. Jeanne Green, of Davenport, had this to say about the meeting: "If the saying 'He who stops being better stops being good' applies to our group, then the 100 medical assistants from towns scattered from Clinton to Council Bluffs want very much to do their jobs better."

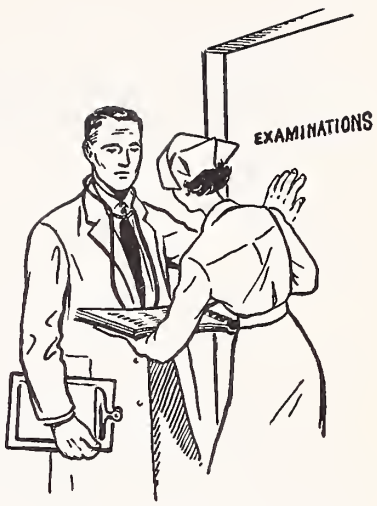
Those girls are receptionists, bookkeepers, medical secretaries, laboratory and x-ray technicians, RN's and LPN's, but all of them are medical assistants. As I met and talked with them, I was impressed with their desire to know more about the work they do, and with their constant searching for better and more efficient ways of assisting their physician employers and their patients.

This did HAPPEN!

WATCH FOR MORE EDUCATIONAL PROGRAMS IN THE FUTURE.

—MARIAN LITTLE

THE DOCTOR'S BUSINESS



Internal Control

LARRY E. LEAVERTON
Des Moines

Internal control is a term that should be familiar to all business and professional offices. Simply stated, it means an orderly and accurate system for the flow of cash through your office. With the present increasing volume of charge and cash transactions in physicians' offices, it is important that all reasonable steps be taken to assure accuracy in the handling of receipts and deposits.

The following are some good basic procedures to use in avoiding inaccuracies in your office systems and discouraging dishonesties on the part of your employees:

Require that pre-numbered receipts be written for all money received.

Insist that receipts be balanced daily. The total of payments received during the day must equal the actual count of cash.

Require deposits of the entire day or days' receipts intact.

Require that bank deposit slips be filled out in duplicate, with names listed.

Use a separate petty cash fund for small cash expenditures, supported by an itemization of all expenditures.

The doctor or an outside party should verify receipts periodically.

Require verification of bank reconciliations.

Distribute the duties of proving and balancing to two or more assistants. For example—one assistant receives cash; and the other makes up deposits, or prepares and mails statements.

Require a charge slip for every patient seen.

All posting to patients' financial records should be reflected on the daybook or daily summary sheet.

Maintain a control account for all accounts receivable from patients, and verify it periodically. An accounts-receivable control is maintained by setting up a control figure of the total of your accounts receivable from patients, and adding or subtracting the increase or decrease of charges and receipts each day or month. This running total can then be verified with a new total of accounts receivable. Differences between these two totals will point up any inaccuracies or irregularities. Whether you are using a pegboard, posting machine or manual system for your accounts-receivable system, all charges, payments, discounts or refunds should be reflected in the daybook or daily summary sheet.

Cash withdrawals by the doctor are inadvisable. If you need cash, have the cashier cash your personal check, so her receipts will stay in balance.

If you are financially successful, don't flaunt your wealth to your employees.

All patients wishing to pay should be referred to your business office.

Insist that proper time be allotted to balancing and proving cash. Lack of time is a frequent excuse given for a failure to follow good procedures.

Insist that your personnel take annual vacations.

Insist that all records be kept in the office and not taken home or out of the office to "get them up to date."

Occasional "spot checking" should be done by an outside examiner to determine the degree of accuracy.

Have an adequate fidelity bond covering the employees in your office.

All of the above methods will not constitute an absolute guarantee that you will have 100 per cent accuracy in your office, but they are sound procedures and will be a deterrent to a dishonest individual. The best means of avoiding such difficulties is to choose high caliber personnel, check their references, compensate them well and maintain high morale in your office. When checking references, one should get a thorough personal history and credit report on an employee who is going to handle your finances. An individual with an unfavorable background and poor credit would be a poor selection.

Good internal control is important to protect your financial interest, it will assure complete and accurate records to support your tax returns, and it is essential in a well managed practice.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

STATE DEPARTMENT OF HEALTH

James F. Speers, M.D.

JAMES F. SPEERS, M.D., M.P.H., COMMISSIONER

The Significance of the Sodium Content of Public Water Supplies

In normal man, minute quantities of sodium are needed to maintain normally functioning metabolic processes. Sodium taken into the body in excess of these minute quantities is excreted primarily in the urine. There are biological regulatory mechanisms in the body which rapidly and precisely adjust the excretion of sodium to conform with intake. There is no tendency to accumulate the sodium ion when the salt intake is excessive; nor is there ordinarily any tendency for the body to develop a deficiency of this ion, since even a poor diet supplies more sodium than is required to satisfy normal physiologic requirements. Sodium deficiency, however, may occur in normal people as the result of extraordinary losses through profuse sweating over a prolonged period.

For reasons that are not completely clear, the regulatory mechanisms which are responsible for maintaining a constant sodium content in the body, fail to function properly in several very common diseases of the heart, kidney and liver. Some patients with such diseases are unable to rid themselves of sodium, and consequently accumulate large amounts of sodium-containing extracellular fluid. This condition is known as edema. It appears that this edema may be largely prevented—or dissipated if already present—by restricting the amount of sodium which the person takes into his body.

The American Heart Association defines three levels of dietary sodium restriction in the treatment of congestive heart failure. These are listed below, along with the sodium intake provided by a normal diet.

Level	Sodium Intake in mg/day
Normal consumption	3000-5000
Mild restriction	1500-3000
Moderate restriction	500-1500
Severe restriction	200- 500

Moderate sodium restriction involves reducing the sodium intake from all sources by 75 per cent or more through careful selection of food and the elimination from the diet of most foods to which sodium is added in processing. A severe restriction involves a reduction by 90 per cent or more of normal sodium intake and an extremely rigid selection of only those foods naturally low in sodium. Even regular milk is generally excluded from the diet.

The literature shows no conclusive evidence that the mineral content of drinking water is related to the incidence of or the mortality from cardiovascular diseases. Some studies have shown low mortality rates in areas of high mineral content drinking water, but other studies have shown the opposite to be the case.

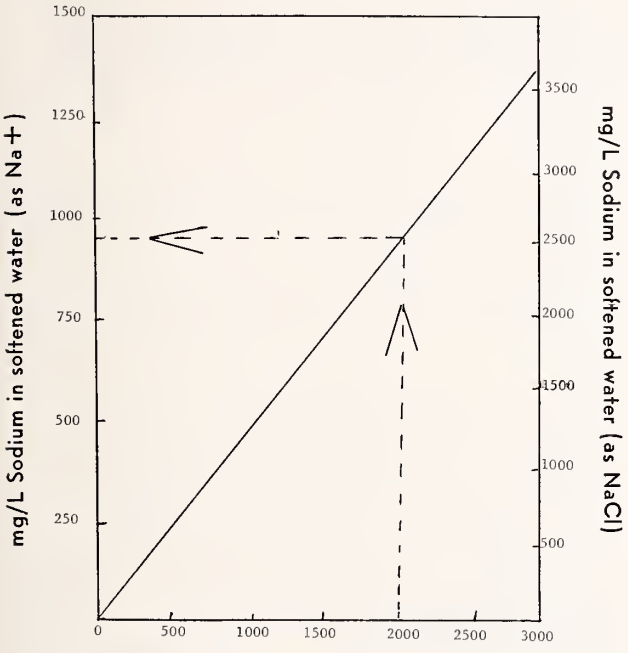
However, there is an important concept here that should be considered. It concerns the sodium content of the drinking water consumed by patients whom a physician is treating by means of a low-sodium diet. If one assumes an average daily consumption of 2.5 liters of water in food and drink, it follows that when the water contains as much as 200 mg. of sodium per liter, the patient will receive 500 mg. of sodium from water alone. Although this sodium intake is not harmful to normal individuals, it must be considered so for patients on a sodium-restricted diet.

The sodium content of public water supplies in Iowa is available from the Environmental Engineering Service or Chronic Illness and Aging Service, Iowa State Department of Health, Lucas State Office Building, Des Moines, Iowa 50319. There are a number of communities with sodium contents in their water supplies of over 200 mg. per liter, and some as high as 800 or 900 mg. per liter.

Some methods used for softening water increase the concentration of sodium. The ordinary household softening unit is of the base-exchange type, which softens the water by adding sodium to replace the calcium and magnesium in the ratio of 2 atoms of sodium for each atom of calcium or magnesium. The amount of the increase of sodium will depend upon the amount of hardness removed from the water.

The accompanying graph shows the relationship between hardness and the increased sodium content resulting from ion exchange (softening). It should be emphasized that the figures do not include the initial sodium content of the untreated water. That should be added to the amount contributed by softening.

Chart Showing Sodium Replacement
in
Common Household (Zeolite) Water Softening Process



Total raw water hardness, P.P.M. as $CaCo_3$

Note: Add initial sodium content to figure obtained from Chart to get total sodium content of home-softened water.

Hand, Foot and Mouth Disease In Iowa?

ARNOLD M. REEVE, M.D., M.P.H., chief,
Preventive Medical Service

Hand, foot and mouth disease (HFM) has recently been diagnosed in considerable numbers in patients in Maryland, New York, Georgia and Washington, D. C. First recognized in 1958, HFM is characterized by vesicular lesions on the palms of hands, on the soles of feet and on the buttocks, and in the mouth. A low-grade fever usually is present. Rupture of the vesicles in the mouth may produce ulcerative stomatitis, painful enough to interfere with eating. Generally the disease is mild and lasts about a week. Children between one and seven years of age are most often affected, but cases have been observed in younger children and in adults.

The etiology is believed to be Coxsackie virus Type A-16. This virus has been isolated from the throats, stools and vesicular fluids of patients with typical symptoms. Inclusion bodies have been noted in scrapings from vesicular floors.

A number of patients exhibiting very suggestive symptoms were recently seen by a pediatrician in Johnson County, Iowa. The State Hygienic Laboratory immediately began virus isolation attempts. Inoculated suckling mice have exhibited paralysis. Additional tissue-culture procedures are now in train. Although definitive work is still incomplete, this first notification is being made to the physicians of Iowa. A full account will be rendered after studies have been finished.

HFM is *NOT* related to, nor is it to be confused with the foot and mouth disease of cattle.

Morbidity Report for Month of July, 1968

Diseases	July 1968	June 1968	July 1967	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	113	332	274	For the state
Typhoid fever	0	1	0	
Smallpox	0	0	0	
Measles	7	11	18	For the state
Whooping Cough	2	1	9	Mahaska, Marion
Brucellosis	10	1	3	For the state
Chickenpox	55	317	53	For the state
Meningococcal meningitis	0	1	0	
Mumps	101	700	179	For the state
Poliomyelitis	0	0	1	
Infectious hepatitis	28	27	28	For the state
Rabies in animals	9	12	16	For the state
Malaria	1	2	0	Polk
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	11	11	18	For the state
Syphilis	35	71	96	For the state
Gonorrhea	291	383	274	For the state
Histoplasmosis	1	4	0	Johnson
Food intoxication	30	52	0	Polk
Meningitis (type unspec.)	7	0	1	For the state
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	0	
Salmonellosis	9	9	19	For the state
Tetanus	1	0	1	Linn
Chancroid	0	1	0	
Encephalitis (type unspec.)	0	0	0	
H. influenzal meningitis	0	0	0	
Amebiasis	0	0	0	
Shigellosis	10	7	17	For the state
Influenza	0	0	0	

Woman's Auxiliary News

From the President

That faint swishing sound you heard was summer passing. The last time I looked it was June, and now . . . all the middle months are gone and it is September. Vacations are over, the little monst . . . er the children are back in school, and our husbands have wistfully put away golf clubs and fishing tackle.

As the fall and winter seasons unfold, I hope we can all turn eagerly to the many urgent tasks we have to challenge us. Now is the time for each county president to gather her committees about her and plan the programs of community service we can do so well. You members-at-large may feel a little lonely without a county group, but your efforts, although perhaps more difficult, are most valuable. You are not really alone, however, for the whole State Auxiliary is with you!

Our Working Conference is to be held on October 22, 1968, and we hope all county presidents, as well as the other State Board members, will come join us at the Medical Society Building in West Des Moines. County officers, county chairmen and members-at-large, too, are urged to come see what this is all about. I would like to visit any of you who invite me to your meetings, or to stop by your homes for chats whenever it can be arranged. Better yet, come through Davenport, and stop to visit us in our home.

This fall season brings a great American experience—the election. Whatever your political persuasion may be, I hope you will exercise your precious right at the polls. Whatever you may believe, vote for it!

Our AUXILIARY is a going concern. Let us make it grow even more.

—Lenor Bishop (Mrs. James F.)

1968-1969 Memberships

To be sure every Auxiliary member receives MD'S WIFE promptly, we are asking county treasurers to send dues and completed membership cards as early in the year as possible, rather than to wait for the final dues date, which is March 31, 1969. New members will receive MD'S WIFE as soon as their dues have been recorded at the National office. Dues for 1968-1969 may be remitted at any time after July 1, 1968. Membership-records material (used for collection procedures), together with complete instructions, are to be sent to state treasurers shortly. The state treasurer will then forward to each county treasurer the proper material and instructions.

Each member-at-large will again pay dues to the councilor in the district in which she resides.

The Iowa Delegates, Summary of the National Convention

MRS. H. G. ELLIS, MRS. MAX OLSEN, MRS. DWIGHT CONKLIN and MRS. DANIEL COUGHLAN

The Woman's Auxiliary to the Iowa Medical Society was represented at the annual convention of the Woman's Auxiliary to the American Medical Association by Mrs. James Bishop, president; Mrs. Daniel Coughlan, president-elect; Mrs. Max Olsen, immediate past-president and delegate, and Mrs. Howard Ellis and Mrs. Dwight Conklin, delegates. Several alternate delegates were also present at the meeting.

Mrs. Howard Ellis was elected a regional vice-president of the National Auxiliary.

STATE REPORTS

During the portion of the meeting allocated to state reports, a representative from each state Auxiliary—usually the president or the immediate past-president—reported on the outstanding activities of her organization during the previous year. One of the most commonly reported activities was that of Health Careers, which, of course, is a program well suited for Auxiliary activity. Iowa's Health Careers report, given by Mrs. Max Olsen, immediate past-president, was perhaps the most outstanding due to her original presentation illustrated by hand-drawn charts.

The American Medical Association Educational Research Fund promotion rightfully occupied the efforts of many state Auxiliaries, and direct scholarships to worthy students were also offered by many Auxiliaries.

Many Auxiliaries participated in the "Mop up Measles" immunization campaign, and several reported that their members have worked as volunteers in disaster areas. Participation in venereal-disease-eradication efforts was reported by many organizations.

Several Auxiliaries collected huge amounts of medical supplies for distribution to American doctors in Pacific-outpost hospitals.

The novel ideas reported included the distribu-

tion of "Health Message of the Month" leaflets to doctors' offices for inclusion with monthly statements; the organization of a health team to give physical examinations to the doctors themselves; and the distribution of a questionnaire with respect to the individual Auxiliary member's participation in civic, religious, educational and political affairs.

One state reported sponsoring and staffing a day-care nursery, and another had fitted out and dispatched a bus with a traveling exhibit on Homemaker rehabilitation—the theme being: "It's Ability—Not Disability—That Counts."

Hearing and vision screening were projects in some states, and other states reported on their photographic displays of jobs available in the health activities of the community.

One Auxiliary adopted an orphanage in Viet Nam. Two states are assisting local Indian students, another holds health clinics for migrants' children, and another has volunteers regularly visiting juvenile court to examine juveniles for mistreatment and needed medical attention.

Legislative activities were high on the agendas of many Auxiliaries, as were various mental-health projects.

It would be valuable if our entire membership could attend these meetings and receive the stimulation afforded by hearing about the varied worthwhile activities of the 50 state Auxiliaries. It certainly behooves the Iowa Auxiliary to double its efforts in constructive community activities in order to remain abreast of our sister state Auxiliaries.

It is felt that your officers and delegates did gain worthwhile suggestions and knowledge for future use.

AMPAC

"A plea, not a report," was presented by Mrs. Frank Gastineau, a national past-president (1959-1960) and a member of the National AMPAC Board. Her salient points included:

1. Millions of dollars will be spent to elect a President, Vice-President, 435 Congressmen, one-third of the membership of the U. S. Senate, state legislators and other officials, and county officers.

2. To the victors go the appointments to tens of thousands of non-elective offices; these appointees will have billions and billions of dollars to spend.

3. AMPAC neither endorses nor supports a presidential candidate.

4. Most AMPAC efforts support candidates for the U. S. House of Representatives—in some states for state legislators.

5. The politically apathetic most commonly give as their reason for staying away from the polls—"One vote can make no difference." FACT: If Richard Nixon, in 1960, had received one more vote per precinct in the United States, he would have become President of the United States.

6. For the last decade, women have out-voted men, BUT wives of physicians have not been conspicious in political activity. AMPAC wishes this were not so.

7. The doctor's wife who takes the political party route is in a position to select candidates. There are many things she can do, without throwing her day-to-day schedule into disorder.

8. The doctor, for the most part, does not have much time for political activity; PAC members work mostly in (1) finance and (2) opinion-making.

9. What can "U" do?

a. At least register and vote in every election.

b. Join the state PAC.

c. Be an opinion-maker; your opinion is accepted in the community.

d. "Talk-it-up" for your candidate, every place you go.

Conclusion: It is more than a cliché to say that this is a "critical" election year. It was never more so than now. Physicians need men who will think before they vote, for the health problems of today are so complex. I implore you! Get involved in political action. (1) We must live with politics; (2) we must influence it as much as we can; and (3) we must master its ways. Otherwise, it will master what we do.

HEALTH EDUCATION

Since our goal is to make available large numbers of qualified personnel who can provide comprehensive and personal health services for *every* individual in our country, we must

find
motivate
encourage
educate
train
and keep the workers.

Three ways in which we should encourage interest in health careers are—(1) improved counseling, (2) work experience in health facilities and (3) expanded work-study programs.

Eleven ways in which we may choose to promote health-centered or health-connected educational and service activities needed in our communities, be they urban or rural, are:

(1) Emphasizing health of youth and children

(2) Helping provide educational programs, and cooperating with disease-detection programs

(3) Arranging quackery and faddism programs

(4) Presentation of health-education materials

(5) Presentation of "package programs"

(6) Cooperation with local volunteer blood-donor programs

(7) Publicizing poison-prevention week

(8) Participating in health fairs, speakers' bureaus, etc.

(9) Planning and presenting GEMS programs (babysitting training courses)

(10) Achieving wider use of available films
(11) Promoting homebound-handcraft sales

Check with your state chairmen for detailed information:

Community Services: Mrs. O. A. Elliott (Vi), 4010 Welker Street, Des Moines 50312

Health Careers: Mrs. C. O. Adams, 515 South Vermont Street, Mason City 50401.

AMENDMENTS TO THE NATIONAL BYLAWS

Six amendments were passed. Three of them were necessary in order to simplify bookkeeping and vouchering procedures at such times as may be practical. These were passed without opposition.

A fourth amendment will allow the Nominating Committee to meet elsewhere than in Chicago, if this should seem feasible. This one passed without controversy.

The other two amendments will have the effect of raising national dues from $2.00 to $4.00. A delegate from Pennsylvania expressed disapproval, using the importance of the local Auxiliary as the basis for her oppostion. Those favoring the amendment pointed out that because of rising costs many organizations are finding it necessary to raise dues in order to maintain their present effectiveness. It was acknowledged that the local county is the "grass roots," but that the State and National are the cohesive counterparts. It was stressed that the county level is not "an island," and that without the State and National levels "our voices would be mere babbles." The amendment then passed on a voice vote.

Around the Hawkeye State

Polk County

The Woman's Auxiliary to the Polk County Medical Society has been instrumental in furnishing TODAY'S HEALTH magazine to 60 elementary schools and 24 secondary schools in Des Moines.

The PCMS Advisory Committee has given its approval for our Christmas Card project for 1968.

We are now making the deliveries for Meals Service from Methodist Hospital to patients with heart, cancer, stroke and related diseases who are out of the hospital, are unable to prepare their meals, and wish to avail themselves of this service. The service consists of a hot meal at noon and a light evening meal five days a week, Monday through Friday. Requests for this service may be made by calling the HOME CARE-HOME-MAKER SERVICE or the INFORMATION and REFERRAL CENTER—Telephone 244-8646.

Ten members of the Woman's Auxiliary to the Polk County Medical Society helped man the Iowa Medical Foundation's booth at the State Fair, August 16-25. Five members who are nurses served at the Red Cross first aid booth.

—MRS. THOMAS BOND
Publicity Chairman

Happiness

Life is nothing more or less than just a quest for happiness. Some seek it in one way, and others in another. Some think it can be found in travel and adventure. Others seek happiness in music, art, philosophy, love, money. And still others look for it in pleasure, leisure, fine clothes, beauty or cars. Position, show or power is the goal of others. Thus the search goes on, and even though one gains, in a measure, some of the desires of his heart, he is not satisfied. He wants something else; or gaining what he desired, he finds it was not what he wanted after all.

Happiness is the process of radiation, not absorption. Upon our ability to give happiness to others depends our capacity for enjoying happiness. It is almost an axiom that one cannot be happy alone. To have joy, one must share it. The most joy and contentment comes from service to others.

David Grayson once said, "Happiness, I have discovered, is nearly always a rebound from hard work. Happiness loves to see men at work. She loves self-sacrifice. She is found not in palaces, but lurking in cornfields and factories and hovering over littered desks. She crowns the unconscious head of the busy child. If you look up suddenly from hard work, you will see her, but if you look too long, she fades sorrowfully away."

From ARK MAP—Little Rock, Arkansas
Spring, 1968

Have you moved in the past few months? PLEASE send any changes of address to 1001 Grand Avenue, West Des Moines, Iowa 50265. Communication is a necessity: Do help keep our mailing list up to date. You are our best source of accurate information.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

President-Elect—Mrs. D. W. Coughlan, 5410 Grand Avenue, Des Moines 50312

Recording Secretary—Mrs. E. D. Wiley, 30 West Kings Highway, Sioux City 51104

Treasurer—Mrs. J. F. Veverka, Box 324, Prairie City 50228

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

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Personals



Dr. Keith VandenBrink has become associated with **Drs. D. W. Blair** and **F. E. Thornton** in the practice of orthopedic surgery in Des Moines. Dr. VandenBrink studied medicine at the U. of I. and took his internship in Des Moines. He then spent two years in the military and has just now completed a four-year residency in Memphis.

Dr. Paul W. Vander Kooi joined the Medical Clinic in Orange City on July 1. Dr. Vander Kooi attended Central College, graduated from the University of Minnesota Medical School in 1965 and interned at Broadlawns Hospital in Des Moines. While in military service, Dr. Vander Kooi served as a physician in the Public Health Service on the Papago Indiana Reservation located near Tucson, Arizona.

Dr. David Ferguson began the private practice of medicine in Grinnell on August 1. For the past year Dr. Ferguson has been the senior medical officer at the Armed Forces Examining and Entrance Station in Kansas City, Missouri. He was discharged from the U. S. Navy in July. Prior to going to Kansas City, Dr. Ferguson served as battalion surgeon with the Third Infantry Battalion, Fourth Marines in Vietnam. During his service in Vietnam he received the bronze star and the Vietnamese cross for gallantry. Dr. Ferguson received his B.S. degree from Iowa State University and his M.D. from the U. of I. College of Medicine. He interned at Broadlawns Hospital in Des Moines in 1966.

Changes in the service-chief personnel of the Iowa State Department of Health have been announced by **Dr. James F. Speers**, Iowa commissioner of public health. **Dr. Ronald D. Eckoff**, who was chief of the Chronic Illness and Aging Service prior to taking a year's leave to complete work for a master of public health degree, has been named chief of the Community Health Service. **Dr. Elizabeth D. Proctor,** who served as acting chief in Dr. Eckoff's absence, has been named chief of the Chronic Illness and Aging Service. Dr. Proctor received her medical degree from the University of Vermont. A native of Coloma, Michigan, Dr. Eckoff received his medical degree from the University of Michigan in 1964 and his master of public health degree from Harvard University in 1968.

Dr. W. E. Chase, formerly of Rippey, was recently appointed to the position of director of student health at the University of Northern Iowa in Cedar Falls. Dr. Chase has served on the staff there for the past two years. He began his new duties on July 1. A new physician, **Dr. T. J. Timmons,** a former Canadian, has been added to the staff to help meet the health needs of an ever-growing student enrollment.

Dr. J. F. Gerken, of Waterloo, was appointed on Monday, July 15, by the Board of Health as city health officer, to succeed **Dr. Robert Lazarus**, who recently resigned.

Dr. B. L. Basinger, of Goldfield, was honored at an open house held on Sunday, July 14, in the Goldfield Community High School. Dr. Basinger was cited for his many years of loyal and devoted service not only as a medical doctor but as a community leader. Dr. Basinger graduated from the University of Michigan Medical School in 1925. Following his year of internship at Grace Hospital in Detroit, Michigan, he began his practice in Blakesburg in 1926. Four years later he moved to Goldfield and began practicing medicine there on January 15, 1930. He retired from his private practice in September 1967. Dr. Basinger, who practiced in Goldfield 37 years, served 11 years as chairman of the Goldfield School Board, 20 years on the Wright County School Board, and 21 years as an elder in the United Presbyterian Church plus being affiliated with other community organizations and projects.

Dr. James A. Clifton, professor and vice chairman of the Department of Internal Medicine at

the U. of I., has been elected to two national posts in the medical profession. He has been named vice president of the American Gastroenterological Association and a member of the sub-specialty board on gastroenterology of the American Board of Internal Medicine.

Dr. Charles Stinard, of Glenwood, began the practice of medicine there, August 16, on a limited basis and by appointment only. Dr. Stinard is using the office formerly occupied by the late **Dr. E. C. Magaret.** He will continue to practice part-time at Glenwood State Hospital-School, where he has been clinical director and medical director for the last five years. Dr. Stinard said he was returning to private practice on a part-time basis because of the need for another doctor in Glenwood. From 1956 to 1963, he practiced full-time in Glenwood, before becoming associated with the state institution.

Dr. Heinz S. Jacobi has resigned from the staff of Medical Associates, New Hampton. The date of his resignation has not been announced. Dr. Jacobi joined Medical Associates in early 1960, coming to New Hampton from a post at the Veteran's Administration Hospital in Topeka, Kansas. He is certified by the American Board of Surgery. Dr. Jacobi's future plans are indefinite at this time.

Dr. Robert Stickler, a Des Moines surgeon, has been named medical director of the National Travelers Life Company. Dr. Stickler received his medical degree from the U. of I. and served his internship at Iowa Methodist Hospital in Des Moines, returning to University Hospitals for his residency. Dr. Stickler is on the staffs of Iowa Lutheran, Mercy, Iowa Methodist and Northwest Hospitals. He is a member of the American College of Surgeons, and the American Society of Abdominal Surgeons. Dr. Stickler is currently a member of the planning committee of the Des Moines Art Center, and serves on the alumni board of the U. of I.

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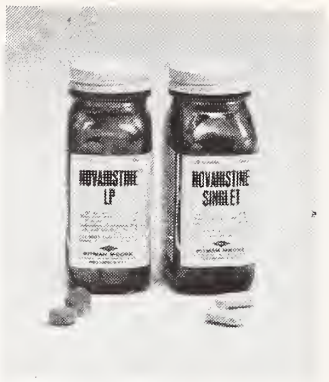
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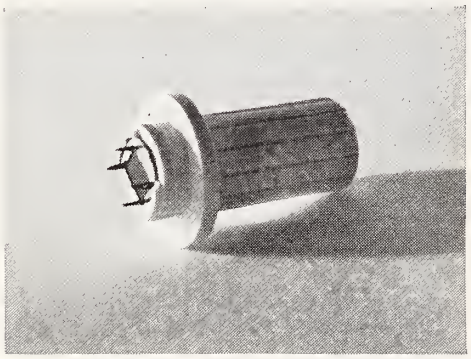


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Dr. Manly Michaelson, of Bellevue, moved in August into new office quarters in a building which he recently purchased at the corner of Riverview and State Streets there. All facilities have been expanded at the new location, and additional examination and treatment rooms have been added to expedite the handling of patients.

The appointment of **Dr. Lloyd E. Caauwe,** of Marlow, Oklahoma, as chief medical officer at the Iowa State Penitentiary in Fort Madison was announced Saturday, August 3, by the State Department of Social Services. Dr. Caauwe, a 1951 graduate of the U. of I. College of Medicine, practiced for one year at Marengo in the mid-1950's. He will direct the medical facilities at the prison, and serve as a consultant in sanitation, safety and dietetics. The appointment was effective August 1.

Dr. Lee A. Simso, a surgeon, has joined Surgical and Orthopedic Associates, at Waterloo. Dr. Simso has been on the staff of Hennepin County Hospital, in Minneapolis, Minnesota, the last two years.

Lt. Robert L. Vickerman, of Keosauqua, has completed his internship at the Great Lakes Naval Base, Great Lakes, Illinois. Dr. Vickerman attended pre-medical school at Northeast Missouri State Teachers College in Kirksville for three years, and received his M.D. degree from the U. of I. College of Medicine in 1967. He was commissioned an ensign during his junior year and is serving in the U. S. Navy Medical Corps. He reported to the Naval Submarine Base at New London, Conn., on July 14, for training in submarine medicine.

Dr. Michael Abrams has finished his year of internship at Sacramento County Hospital at Sacramento, California, and is now a general practice resident at Broadlawns Hospital in Des Moines. A graduate of Luther College, Dr. Abrams received his medical degree at the U. of I. College of Medicine in 1967.

Dr. Harry D. Harper, Jr., of Fort Madison, described the work of the Lee County Mental Health Center at a luncheon of the Rotary Club in Keokuk on Thursday, July 11. Dr. Harper, a psychiatrist, is medical director of the Center.

A former Des Moines general practitioner, **Dr. Richard W. Hammer,** is now an instructor in adolescent medicine at the University of Nebraska Health Service, in Lincoln. Dr. Hammer served his

pediatrics residency at the Adolescent Division of Children's Hospital, in Boston, and at Iowa Methodist Hospital in Des Moines. Most recently, Dr. Hammer has been working on the intern instruction program at Iowa Methodist Hospital.

Four surgeons at Veterans Hospital in Des Moines have been granted associate clinical professorships by the U. of I. College of Medicine. **Mr. E. W. Christensen,** VA Center director, has announced that appointments were granted to **Drs. Wendell S. Sharpe,** assistant chief, Surgical Service; **Donald J. Lulu,** section chief, General Surgery; **Lester R. Dragstedt,** General Surgery and Surgical Research; and **Lino J. Arduino,** Urological Surgery. Currently, 17 residents in general surgery, urology and ophthalmology are in training at Veterans Hospital.

The Most Reverend Maurice J. Dingman, bishop of Des Moines, presided at the Wednesday, July 17, groundbreaking ceremony for the New Mercy Hospital to be erected in Council Bluffs. Also participating in the ceremony was **Dr. Martyn Bierman,** president of the Mercy Medical Staff. It is anticipated that the new facility will be completed and ready for occupancy in August, 1970.

Dr. James W. Hopkins, of Des Moines, was one of 96 pediatricians elected to fellowship in the American Academy of Pediatrics at a meeting in Evanston this past summer.

Dr. Martin E. Greenberg, a pediatrician, joined the staff of Medical Associates in Clinton on August 5. A native of New York City, Dr. Greenberg is a graduate of the Rutgers University School of Pharmacy and the University of Amsterdam Medical School. He interned at the Hackensack, N. J., hospital and has spent the last two years in a pediatric residency at Raymond Blank Memorial Hospital in Des Moines.

Dr. Albert Yocom, of Chariton, has accumulated a record very few can match—perfect attendance at the Chariton Rotary Club for 36 years. Dr. Yocom, a charter member of the Chariton Club which was organized on April 20, 1932, is now an honorary member.

A community farewell reception in honor of **Dr. and Mrs. Carl D. Oelrich,** of Sioux Center, was held at the city park bandshell on Tuesday, August 6. Prior to giving up his medical practice in Sioux Center on July 1, Dr. Oelrich had served the community and surrounding area since 1934



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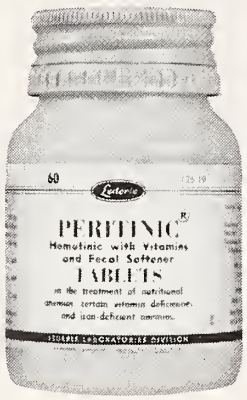
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in the general practice of medicine. He operated the community's first hospital (a 10-bed facility) from 1938 to 1943, and has served on the medical staff of the Sioux Center Community Hospital since its erection in 1951. During World War II Dr. Oelrich served three years in the Air Force Medical Corps. Dr. and Mrs. Oelrich are moving to Greeley, Colorado.

Dr. Ronald K. Bunten has joined **Drs. Douglas N. Gibson** and **John H. Kelley,** in the practice of orthopedic surgery in Des Moines. Dr. Bunten received his medical degree from the U. of I. in 1960 and subsequently interned at Broadlawns Polk County Hospital in Des Moines. He entered the U. S. Navy and served as a flight surgeon in Jacksonville, Florida. Following his release from the Navy, Dr. Bunten took general surgical-orthopedic training at the U. of I., and is presently board eligible in orthopedic surgery.



Dr. Bunten

Dr. Malcolm Royal, of Des Moines, is scheduled to talk on pioneer medicine in Iowa, to a class of retired people under the sponsorship of the Adult Education Department of the Des Moines Public Schools.

Dr. Russell S. Gerard, a Waterloo surgeon, has been appointed to the board of directors of Peoples Bank & Trust Co. in Waterloo. Dr. Gerard is a past president of the Black Hawk County Medical Society and was named 1967 "Person of the Year" by members of the Waterloo Chamber of Commerce. He has been active for many years in professional and civic service, including service as president of the Waterloo School Board, as well as president of Black Hawk County United Services, riverfront commissioner, trustee of the United Fund of Iowa, former chairman of the YMCA Youth Committee and member of the board of directors of the American Cancer Society, Iowa Division, Inc.

Dr. Richard Preston, of Des Moines, talked to the West Des Moines Rotary Club, July 16, on the subject of drug abuse.

Dr. W. H. Verduyn, a general practitioner in Reinbeck and Hudson, was hospitalized in mid-August at Schoitz Memorial Hospital in Waterloo.

Dr. Robert Porter, a Des Moines general practitioner, told the Des Moines Hi-Twelve Club about his experiences in Viet Nam and showed slides of some of his patients and of the countryside at a meeting held on July 24.

The Northwest Iowa Mental Health Center, at Spencer, was host, on Wednesday, July 17, to representatives of all mental health centers in the state at the New Inn, on West Okoboji Lake. About 100 people attended the meeting. **Thomas Murphy, M.D.,** of Cedar Rapids, spoke on the mental health centers' services for alcoholics, and **Mr. Kenneth Eaton,** of Des Moines, deputy director of the Iowa Comprehensive Alcoholism Project spoke on his group's program. **Mr. Robert L. Webber,** of Des Moines, executive director of Planned Parenthood of Iowa, discussed family planning, and **Dr. Leroy K. Berryhill,** of Fort Dodge led a discussion of proposed state legislation affecting mental health centers.

Dr. Richard Bealka, a child psychiatrist at the Independence Mental Health Institute, spoke on the emotional problems of children at a supper meeting of the Independence Lions Club on July 16. He expressed hope that the new children's hospital at the Independence institution will be ready for occupancy late this fall or early during the coming winter. A staff of psychiatrists and psychologists plus nine teachers are working with the inpatient youngsters, and he said it is possible that in the future a day hospital may be established for disturbed children who can commute daily between their northeast Iowa homes and the hospital.

Dr. Alson E. Braley, of Iowa City, new governor of Rotary International's District 600, paid his annual visit to the club in Marshalltown on July 22. A professor and former head of the U. of I. Department of Ophthalmology, he currently is vice-president of the Eye Association of America.

Mr. Brian F. McCabe, head of otolaryngology and maxillofacial surgery at the U. of I., was inducted into the Collegium Otolaryngologicum Amicitiae Sacrum, in Oslo, Norway, on Monday, August 19. The organization's membership is limited to 10 each from 20 nations and 16 members from the United States. Dr. McCabe is the first Iowan ever elected to the group. Before coming to Iowa City in 1964, Dr. McCabe took his basic medical and specialty training at the University of Michigan, and served as a faculty member there.

Dr. James C. Comstock started general practice with the McCrary-Rost Clinic, in Lake City on



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August 15. A graduate of the University of Nebraska College of Medicine, he served a rotating internship at Nebraska Methodist Hospital, Omaha, and then served with the U. S. Air Force, first at a base in Montana, and subsequently in Vietnam. He and his wife have two children aged nine and eight years.

Dr. Don Penly advised city officials in Cedar Falls not to arrange for the administration of typhoid shots to the people there who had been involved in the August 5 flood and subsequent clean-up operations. He consulted with **Dr. A. M. Reeve,** of the State Department of Health, before giving that advice. He said that since typhoid is spread by an organism contained in fecal material from typhoid patients, and that since there had been no typhoid cases in the Cedar Falls area, there was no chance of anyone's contracting the disease. Waterloo officials reached an opposite conclusion and offered shots to whoever wished them.

A number of Glenwood and Council Bluffs physicians and their wives were guests of Eli Lilly & Co., at Indianapolis, early in August. The doctors, **W. A. De Young** and **R. K. Frysek,** of Glenwood, and **H. F. Trafton, E. O. Bean, J. G. Kruml** and **E. B. Mathiasen,** of Council Bluffs, attended a four-day seminar on infectious diseases there.

The Des Moines City Council recently appointed **Dr. Julius Conner,** director of the Des Moines-Polk County Health Department, to succeed **Mrs. Loren E. Chancellor** as registrar of vital statistics for the city. When the Polk County Board of Supervisors was about to take similar action to fill the post of registrar for the County, an objection was raised to Dr. Conner's performing more than one compensated governmental job, and the matter was deferred pending a county attorney's opinion. Mrs. Chancellor had resigned when her husband gave up his post as state director of vital statistics to take a job with the national vital-statistics collection agency in Washington, D. C.

Dr. Robert Wettach, of Mt. Pleasant, was elected chairman of the Henry-Louisa County Health Planning Council, on July 24, at the organizational meeting held at the Colonial Inn, in Wapello.

The open house at Rockford's new medical center on August 4 was attended by 560 persons. The physicians who will occupy the building, **Dr. Russell Barrett** and **Dr. Stanley Haag,** and their wives, were present. Dr. Barrett had already been

in practice for a week, and Dr. Haag will go there when he finishes his internship at Iowa Lutheran Hospital, Des Moines, next July.

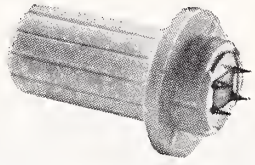
Dr. Donald J. Soll, who has engaged in general practice in Minneapolis for the past two years, joined **Drs. A. H. Grau** and **Thomas S. Hutcheson** at Denison about August 1. He took his bachelor's degree at the University of Iowa, but received his medical training at the Universities of South Dakota and Minnesota, and interned in Long Beach, California. Before studying medicine he was an executive of a large Minneapolis department store. His parents operate a Ben Franklin Store in Cherokee. Dr. and Mrs. Soll have three children.

The government, through Medicare, Medicaid, veterans' programs and others—is paying about 20 per cent of the health-care costs in the country today; the expense is greater than originally predicted; and informed people are sure the cost is going to increase. These were some of the conclusions which **Dr. C. O. Adams,** of Mason City, formed while attending a two-day regional conference on health-care costs in Kansas City during June. He reported on the meeting to the North Iowa Health Council.

State legislation passed in 1967 requires all counties to have functioning boards of health, and allows large cities the option of continuing some health programs or of turning them over to the counties in which they are located. Davenport has voted to relinquish its health inspections to Scott County on April 1, 1969, the end of its fiscal year. At a meeting with the new Scott County Board of Health, **Dr. J. H. Sunderbruch,** the Davenport health officer, said the members of the new Board must begin with inspections in the areas of environment, restaurants, nursing homes and venereal disease. He approved the Board's proposal to hire a well-qualified director for the program at a salary of about $15,000, and advised hiring six inspectors rather than five.

On July 19, **Dr. Robert C. Hardin,** vice-president for medical affairs at the University of Iowa, announced receipt of an award of $50,000 from the John and Mary R. Markle Foundation to support the proposed Health Sciences Library at the University. During the past 10 years six U. of I. faculty members have been named Markle scholars, and the four of them still in Iowa City are **Drs. James Christiansen,** an assistant professor of internal medicine; **Dr. Edson Forker,** an assistant professor of physiology and biophysics and of internal medicine; **Dr. James L. Spratt,** an

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associate professor of pharmacology; and **Dr. Daniel B. Stone,** executive associate dean of the College of Medicine. The Markle scholarships are, perhaps, the better-known part of the Foundation's program.

Dr. W. H. Megorden, of Mt. Pleasant, was the guest speaker at the graduation ceremony of the Medical Assistant Education Division at the Southeastern Iowa Area Community College located in Burlington. The graduation exercise was held on Thursday, July 25, at the First United Methodist Church in Mt. Pleasant.

Dr. C. C. Huntley, physician and surgeon in Avoca for 37 years, retired from practice September 1. Dr. Huntley had been advised by his doctors to terminate his practice there on account of his health. He and his wife plan to leave Avoca about the first of September.

Dr. K. V. Jensen, of Clarinda, moved into his new office building recently. It is located a half block from the business square.

New active members of the Iowa Chapter of The American Academy of General Practice are **Drs. Joe M. Krigsten,** of Sioux City, and **David R. Youberg,** of Sac City. New associate members are **Drs. William C. McCabe,** of Davenport, and **Stephen G. Weiss,** of Bettendorf. **Dr. Thomas R. McMillan,** of Leon, transferred his AAGP membership from Texas to Iowa.

Mr. J. D. Thoreson, a senior medical student at the U. of I., served his preceptorship with **Dr. J. R. Miller,** of Wellman, from July 15 to August 15.

U of I Program in Stroke Management

A University of Iowa-based educational program in *Comprehensive Stroke Management* will be headed by Sidney Scott Davenport, M.D., it was announced recently by the College of Medicine.

The program will provide continuing educational opportunities in stroke management both within the University setting and for the practicing physicians and the health personnel at the community level. Dr. Davenport will coordinate educational resources within the University in support of the Iowa Heart Association's stroke management program.

Dr. Davenport, an associate in neurology, has been at the University of Iowa since 1967. He obtained an M.D. degree from the University of Arkansas School of Medicine in 1961. After his internship at the Bernalillo County Hospital, in Albuquerque, New Mexico, he entered general practice in Van Buren, Arkansas, for one year. Between 1963 and 1964, and 1965 and 1967, he was a resident in neurology at the Baylor University College of Medicine. For six months he was assigned to the Cerebrovascular Disease Service where he performed neurologic evaluations on patients of Dr. M. E. DeBakey, who were being considered for vascular surgery.

Dr. Davenport is a junior member of the American Academy of Neurology and an associate member of the Houston Neurologic Society.

Deaths

Dr. James E. Reeder, Sr., 81, of San Diego, California, a former Sioux City physician, died Wednesday, July 24, in a San Diego hospital after a brief illness. Dr. Reeder practiced in Sioux City as an eye, ear, nose and throat physician from 1914 to 1957. He served as president of the Iowa Medical Society in 1948 and while a Sioux City resident was a member of Landmark Lodge 105 AF & AM, the Sioux City Consistory and Abu Bekr Shrine Temple.

Dr. Edward L. Hollis, 96, who practiced at Marengo for more than 60 years, died on August 7 at the Marengo Hospital, where he had been a patient for about two weeks. He took his M.D. degree at the University of Chicago in 1903, first practiced in Rolfe, and came to Marengo in 1926. He was a Life Member of the Iowa Medical Society.

Dr. Samuel J. Zoeckler, 45, a Des Moines internist, died of cancer August 6 at the Des Moines VA Hospital. His bachelor's degree was from the University of California, and his M.D. was from Tulane. He had practiced with the Internal Medical Clinic, on Ingersoll Avenue at 29th Street, since 1950, he was medical director of the American Republic Insurance Company, and was chief of medicine at the VA Hospital from 1954 to 1956. He was the 1964 recipient of the Paul Cotton Award of the Iowa Chapter of the American Arthritis Foundation.

Dr. Frank N. Weber, 72, who had practiced 40 years in Walnut, died July 27 at a Council Bluffs hospital following a long illness. He was a 1923 graduate of the Creighton University School of Medicine, and a World War I veteran.

JOURNAL of The IOWA MEDICAL SOCIETY

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IN THIS ISSUE:

- Medicine in Vietnam—James E. Whitmire, M.D., Sumner
- The Iowa Regional Medical Program Is Ready for the Operational Phase—W. A. Krehl, M.D., Ph.D., Iowa City
- The Diagnosis and Treatment of Occlusive Vascular Disease:
 Radiologic Aspects—L. L. Maher, M.D., Des Moines
 Surgical Aspects—Wm. H. Myerly, M.D., Des Moines
- Treatment of Lymphomas With Antineoplastic Agents—S. Fred Brunk, M.D., Iowa City
- U. of I. Clinical Pathologic Conference—Hematemesis, Diarrhea, Colitis, Cryptitis



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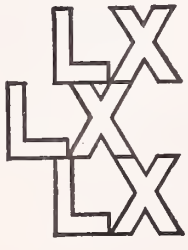
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The JOURNAL of THE IOWA MEDICAL SOCIETY

Vol. LVIII October, 1968 No. 10

CONTENTS

Medicine in Vietnam
James E. Whitmire, M.D., Sumner 1025
The Iowa Regional Medical Program Is Ready to Enter the Operational Phase
W. A. Krehl, M.D., Ph.D., Iowa City . . . 1026

SCIENTIFIC ARTICLES

The Diagnosis and Treatment of Occlusive Vascular Disease: Radiologic Aspects
L. L. Maher, M.D., Des Moines 1029
The Diagnosis and Treatment of Occlusive Vascular Disease: Surgical Aspects
William H. Myerly, M.D., Des Moines . . . 1034
Treatment of Lymphomas With Antineoplastic Agents
S. Fred Brunk, M.D., Iowa City 1038
University of Iowa College of Medicine Clinical Pathologic Conference No. 501 (Hematemesis, diarrhea, colitis, cryptitis) 1042

EDITORIALS

The Low Road 1055
New Drugs 1056
An Elegy 1057
Dreams of Sugarplums 1058
Taking the Joy Out of Life 1059
Funds for the Fight Against Alcoholism . . . 1060
Immutables 1061
Miracles of Therapy Sixty Years Ago: A Testimonial 1061

SPECIAL DEPARTMENTS

Coming Meetings 1009
The Month in Washington 1010
President's Page 1054
University Hospitals Drug Letter
Cholesterol-Lowering Agents, Donald L. Warkentin, M.D. 1067
Current Immunization Program, Sidney S. Kripke, M.D. 1070
Medical Ethics 1072
In the Public Interest facing page 1074
Journal Book Shelf 1075
Information From the Iowa Heart Association
Indications for Cardiac Pacing in Acute Myocardial Infarction 1076
State Department of Health 1078
The Doctor's Business 1082
Iowa Association of Medical Assistants . . . 1086
Woman's Auxiliary News 1091
Personals 1095
Deaths 1102

MISCELLANEOUS

Physicians to Get Sample Copy of SAMA News 1037
Iowa Rules Governing Temporary Medical Licenses 1061
Iowa Thoracic Society Grants and Fellowships 1969-1970 1061
The "Slow Virus" Phenomenon 1063
Fast-Acting Alcohol Antagonist 1077
Radio Device for Monitoring Tracheostomy Tubes 1087
Physicians Are Asked to Help Gather Automobile Accident Data 1090

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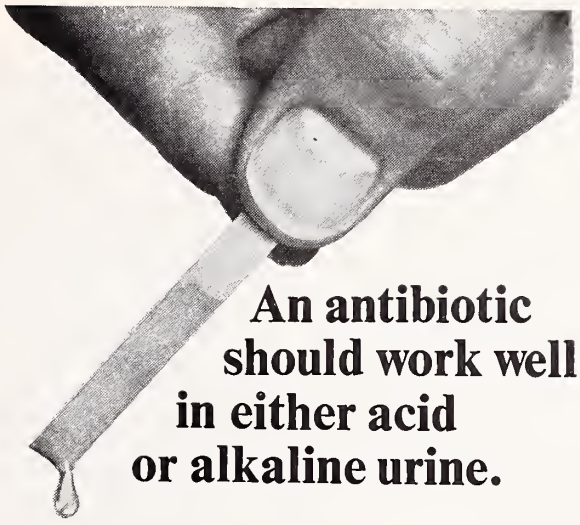
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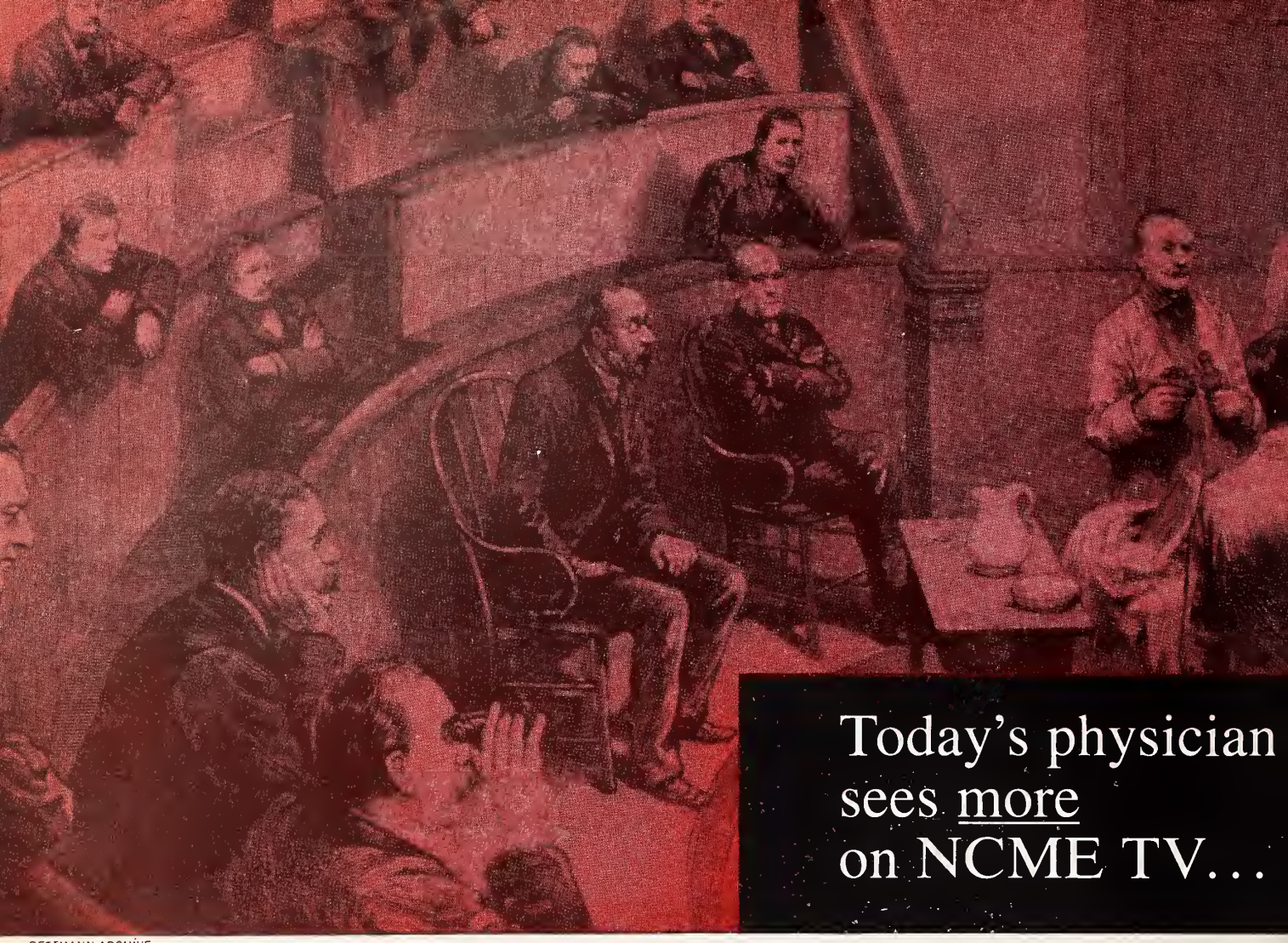
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In this program, Dr. Sawyer performs the operation on a patient with gross occlusion of the right iliac, femoral and popliteal arteries.

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COMING MEETINGS

IN STATE

Oct. 3-5	**Postgraduate Course on Strokes, University of Iowa College of Medicine,** Iowa City.
Oct. 4-5	**Iowa Urological Society Meeting,** Iowa City.
Oct. 4-5	**Postgraduate Course in Urology, University of Iowa College of Medicine,** Iowa City.
Oct. 11-12	**Postgraduate Course in Otolaryngology for General Practitioners, University of Iowa College of Medicine,** Iowa City, Iowa.
Oct. 16	**Mercy Hospital Medical Day,** Mercy Hospital, Sixth and University, Des Moines.
Oct. 21-22	**20th Annual Meeting and Scientific Assembly, Iowa Chapter of the American Academy of General Practice,** Hotel Savery, Des Moines.
Oct. 26-27	**Postgraduate Course in Radiology, University of Iowa College of Medicine,** Iowa City.
Oct. 31-Nov. 3	**American Cancer Society, Iowa Division, Inc.,** Hotel Savery, Des Moines.
Nov. 4-6	**Postgraduate Course on Religion and Medicine,** U. of I. College of Medicine, Iowa City.
Nov. 14-16	**Postgraduate Course in Orthopedics,** U. of I. College of Medicine, Iowa City.

CONTINENTAL U. S.

Oct. 4-8	**Tenth International Congress on Diseases of Chest sponsored by Council on International Affairs of the American College of Chest Physicians,** Washington-Hilton, Washington, D. C.
Oct. 5-6	**AMA National Congress on Medical Ethics (Second),** Drake Hotel, Chicago.
Oct. 7-9	**Kansas City Southwest Clinical Society,** Hotel Muehlebach, Kansas City, Missouri.
Oct. 7-11	**Basic Mechanisms in Internal Medicine, Medical College of Virginia,** Richmond.
Oct. 7-11	**Postgraduate Course in High Risk Infant Care sponsored by University of Colorado School of Medicine,** Denver.
Oct. 7-11	**Computers in Medicine,** University of Wisconsin Medical Center, Madison.
Oct. 7-12	**Pennsylvania Medical Society,** Penn-Sheraton Hotel, Pittsburgh.
Oct. 9-11	**15th Western Cardiac Conference,** University of Colorado Medical Center, Denver.
Oct. 9-11	**Clinical Electrodiagnosis of Neuromuscular Diseases sponsored by New York University Post-Graduate Medical School,** New York University Medical Center, New York.
Oct. 11-13	**Midwest Forum on Allergy,** Continental Plaza, Chicago.
Oct. 14-17	**Indiana State Medical Association,** Indiana Convention Center, Fort Wayne.
Oct. 14-18	**American College of Surgeons, Annual Meeting,** Dennis Hotel, Atlantic City.
Oct. 18	**Surgical Management of Chronic Arthritis, (Illinois Chapter, Arthritis Foundation),** Sherman House Hotel, Chicago.
Oct. 18-19	**Postgraduate Course on Hypertension sponsored by University of Nebraska College of Medicine,** Lincoln.
Oct. 19-24	**Annual Session, American Society of Anesthesiologists,** Washington-Hilton, Washington, D. C.
Oct. 20-21	**37th Annual Meeting of American Academy of American Academy of Pediatrics,** Palmer House, Chicago.
Oct. 20-23	**11th Annual Meeting of American Association of Poison Control Centers,** Palmer House, Chicago.
Oct. 19-23	**Association of Military Surgeons in the United States,** Sheraton-Park Hotel, Washington, D. C.
Oct. 21-25	**Postgraduate Medical Course in Care of Spinal Cord Injury Patients sponsored by Veterans Administration Center,** West Roxbury, Mass.
Oct. 21-25	**Current Concepts of Neurology—Diagnosis and Treatment, University of Maryland School of Medicine,** Baltimore.
Oct. 24	**Medical Secretaries Institute sponsored by University of Nebraska Medical Center,** Omaha.
Oct. 26-28	**Annual Scientific Session, Pennsylvania Medical Society,** Chatham Center, Pittsburgh.
Oct. 26-30	**Thirty-Sixth Postgraduate Assembly, Omaha, Mid-West Clinical Society,** Sheraton-Fontanelle Hotel, Omaha.
Oct. 27-28	**American Social Health Association Annual Conference,** Hotel Biltmore, New York.
Oct. 27-30	**American College of Gastroenterology,** Statler-Hilton, Boston.
Oct. 27-Nov. 1	**American Academy of Ophthalmology and Otolaryngology,** Palmer House, Chicago.
Oct. 28-30	**Workshop on Respiratory Insufficiency sponsored by University of Colorado School of Medicine,** Denver.
Oct. 28-30	**Annual Meeting of Association of Life Insurance Medical Directors of America,** Chase-Park Plaza Hotel, St. Louis.
Oct. 28-Nov. 1	**Rheumatic Diseases: Pathology, Immunology, Diagnosis and Treatment,** Robert B. Brigham Hospital, Boston.
Nov. 6-9	**Conference on Respiratory Therapy,** Statler-Hilton Hotel, Boston.
Nov. 7-9	**Second Annual Postgraduate Conference on Today's Hospital Problems; An Interdisciplinary Approach sponsored by Mound Park Hospital Foundation and University of Florida,** Tides Hotel and Bath Club, Redington Beach, Florida.
Nov. 8-9	**Surgery Conference sponsored by University of Nebraska College of Medicine,** Lincoln.
Nov. 10-15	**Fourteenth Annual Meeting, American Association for Inhalation Therapy,** Houston.
Nov. 11-13	**Postgraduate Course on Gastroenterology,** University of California College of Medicine, Los Angeles.
Nov. 11-14	**Newer Perspectives in Gastroenterology sponsored by University of California, Irvine,** Newporter Inn, Newport Beach, California.
Nov. 11-15	**96th Annual Meeting, American Public Health Association,** Cobo Hall, Detroit.
Nov. 13	**Arthritis Symposium sponsored by University of Colorado School of Medicine,** Denver.
Nov. 13-16	**Forty-seventh Annual Convention of National Easter Seal Society for Crippled Children and Adults,** Sheraton-Boston Hotel, Boston.
Nov. 14-16	**Musculoskeletal Diseases for General Physician,** University of Colorado School of Medicine, Denver.
Nov. 15-16	**Perinatal Cardiac and Respiratory Emergencies, sponsored by University of Nebraska College of Medicine,** Children's Hospital, Denver.
Nov. 18-21	**Symposium on Basic Mechanisms of the Epilepsies, sponsored by Public Health Service Advisory Committee on the Epilepsies and National Institute of Neurological Diseases and Blindness,** Broadmoor Hotel, Colorado Springs.
Nov. 18-22	**Stress and Disease: Relationship of Psychologic and Social Forces in Pathogenic Mechanisms,** University of Oklahoma Medical Center, Oklahoma City.
Nov. 20-22	**1968 Annual Conference of National Society for Prevention of Blindness, Inc.,** Roosevelt Hotel, New York City.
Nov. 20-23	**Western Surgical Association,** Drake Hotel, Chicago.
Nov. 21-22	**Postgraduate Course on Central Nervous System as Mirror of Systemic Disease, sponsored by University of Nebraska Medical Center,** Omaha.
Nov. 21-26	**American Heart Association,** American Hotel, Bal Harbour, Florida.

(Continued on page 1028)



The Month in Washington

Washington, D. C.—President Johnson signed into law the Health Manpower Act of 1968 which extends for two years, until June 30, 1971, and expands the federal programs of aid to medical and allied health schools.

Other health legislation enacted into law: (1) establishes a National Eye Institute as part of the National Institutes of Health; (2) requires federal buildings to provide easy access to the handicapped; (3) authorizes standards to prevent gas lines from leaking and exploding.

President Johnson termed the health manpower law "a major measure in the battle for better health." It authorizes about $1.2 billion in federal aid to medical and other health personnel schools over two years for construction, expansion and operating expenses. Congress followed most of the Administration's proposals in approving the legislation but limited the extension to two years, instead of the four years requested. Schools of pharmacy and veterinary medicine were made eligible for the first time.

Money authorizations for schools in the new law:

Medical and other health professions—construction grants, $395 million; institutional support, $285 million; scholarships, $32.8 million; student loans, $70 million; total, $782.8 million.

Nursing—construction, $60 million; institutional support, $75 million; traineeships, $34 million; scholarships, $50 million; student loans, $41 million: total, $260 million.

Allied health (fiscal 1970 only)—construction, $10 million; institutional support, $20 million; traineeships, $5 million; new methods, $4.5 million; total, $39.5 million.

Public health—graduate training, $20.5 million; traineeships, $24 million; total, $44.5 million.

Health research construction, $50 million.

* * *

Both the Democratic and Republican 1968 national campaign platforms cited the importance of the role of private enterprise in the development of government health programs. The GOP placed greater emphasis on private medicine than the Democratic Party did.

"While believing no American should be denied adequate medical treatment, we will be diligent in protecting the traditional patient-doctor relationship and the integrity of the medical practitioner," the Republican plank said. The Republican platform also pledged "to encourage the broadening of private health insurance plans," including extension to cover mental illness.

"Through a partnership of government and private enterprise, we must develop new coordinated approaches to stem the rise in medical costs without lowering the quality or availability of Medicare care," the Democratic platform said. Without being specific, the Democrats indicated support for universal government health insurance or, at the least, wide expansion of Medicare or Medicaid (or both). Boasting of "giant steps" in the past eight years "in assuring life and health for citizens," their platform said: "We Democrats are determined to take those final steps that are necessary to make certain that every American, regardless of economic status, shall live out his years without fear of the high costs of sickness." The Democratic health plank also said medical costs could be lowered by more out-of-hospital care, by comprehensive group-practice arrangements, by an increased availability of neighborhood health centers, and by the greater use of sub-professional aides.

The Republican platform said that the "inflation produced by the Johnson-Humphrey Administration" was a major factor in the increases in health care costs.

American Medical Association spokesman appeared before the platform committees of both parties at pre-convention hearings. Dr. Donald E. Wood, Indianapolis, Ind., chairman of the AMA's Council on Legislative Activities, testified at the Republican hearing; Dr. John R. Kernodle, Burlington, N. C., a member of the AMA Board of Trustees, at the Democratic. Their statements were identical. The AMA statement expressed hope that the next federal Administration, whether it be Democratic or Republican, "will provide men and women in medicine, and those engaged in the allied sciences, the opportunity to think and work in a free atmosphere to pursue their common goal of a better and more healthful life for everyone."

The AMA emphasized the desirability of health programs' being partnerships between private enterprise and federal, state and local governments. The AMA pledged its support of such cooperative programs for mental illness, infant mortality, occupational health and safety, and education of physicians and allied health personnel.

Concerning health care costs, the AMA said: "We believe that programs to increase the production of medical and other health personnel can be cooperatively and effectively undertaken. We are further firmly convinced that we can and must work toward a halt in the inflationary spiral, and toward a productive use of tax dollars expended in the health area. New and old tax-supported programs in the health field should be critically evaluated so that while the best health care is attained, overlapping, waste and unnecessary pro-

(Continued on page 1011)

The Month in Washington

(Continued from page 1010)

gramming are avoided. In this regard, we recommend the establishment of a cabinet-level Department of Health, headed by a physician as Secretary, with overall responsibility for all federal health programs, so that maximum effectiveness may be attained.

"We have always maintained that high-quality medical care should be available for all Americans, including those who need assistance in meeting the costs of such care. . . . Firmly convinced that adequate health insurance coverage is the choice mechanism for the financing of quality health care costs, we suggest that the country embark on a program of tax credits for health-insurance premiums. Under such a plan, all individuals and families would be encouraged to provide themselves with health-care-cost protection, with those in financial need receiving the greater amount of tax credit on a graduated basis."

* * *

The Food and Drug Administration and the Pharmaceutical Manufacturers Association differed as to the significance of the findings of a Georgetown University School of Medicine team after studies comparing three brand-name drugs with their generic versions.

Drugs tested were diphenylhydantoin, prescribed for treatment of epilepsy, chloramphenicol and sulfisoxazole. The studies supported by the FDA showed:

1. Some generic drugs are absorbed more slowly than the brand;
2. At least one generic drug was absorbed faster by the body than was the brand drug;
3. Absorption rates were governed by such factors as crystal size of the drug, hardness of tablets, and the types of drug capsules.

"Our findings raise serious doubts about the equality of different products of the same drug in the treatment of disease," said Christopher M. Martin, M.D., a Georgetown professor of medicine and pharmacology.

"The studies by Dr. Martin and his research team, showing how different versions of the same drug behave differently in man, provide further proof of the scientific fact that these differences can be significant in patients," Mr. C. Joseph Stetler, the PMA president, said. "Clearly, there is no evidence to indicate that all formulations of the same drug are equivalent. From all the evidence that has been developed to date, as Dr. Martin's studies point out, quite the opposite may be true."

On the other hand, FDA Commissioner Herbert Ley, Jr., M.D., said his agency "has in no sense concluded that 'generic' drugs are less effective as a class than 'brand-name' products."

"In my opinion, there are fewer than two dozen drugs where therapeutic differences among

(Continued on page 1015)

Easy on the Budget...
Easy on the Mother
Tablets & Elixir
For Iron Deficiency Anemia

FAMOUS Fergon®
brand of FERROUS GLUCONATE

BREON LABORATORIES INC.
Subsidiary of Sterling Drug Inc.
90 Park Avenue, New York, N.Y. 10016



"Upper respiratory infection! I thought everything was a 'virus' these days?"

ome U.R.I. patients are more
iserable than others.

hat's why we make Novahistine®
ablets in two different formulations.

nd let you control the dosage.

h Novahistine LP tablets and Novahistine Singlet lets you have the range and flexibility of decongestant age that lets you prescribe for the needs of the vidual patient.

ahistine LP tablets are most useful for relief of al congestion in patients without pain or fever.

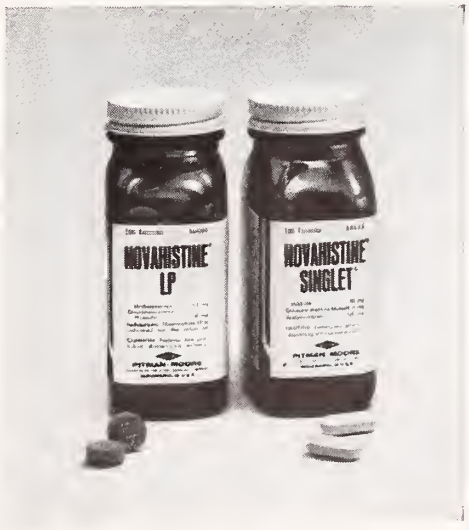
ahistine Singlet tablets, which provide analgesic-pyretic effect, as well as decongestant action, are cated for upper respiratory infections accompanied ain, aches and fever.

ether you prescribe Novahistine LP or Novahistine let, a total daily dose of 3 or 4 tablets will usually ide effective, continuous relief.

cautiously in patients with severe hypertension, etes mellitus, hyperthyroidism or urinary retention. tion ambulatory patients that drowsiness may result.

Novahistine LP tablet contains phenylephrine hydrochloride, 25 mg.; and heniramine maleate, 4 mg.

Novahistine Singlet tablet contains phenylephrine hydrochloride, 40 mg.; heniramine maleate, 8 mg.; and acetaminophen, 500 mg.



PITMAN-MOORE DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS

This advertisement for TAO® (triacetyloleandomycin), published at the request of the Food and Drug Administration, replaces a recent one which the FDA regards as misleading.

The advertisement headlined "new evidence for TAO . . ." and emphasized that the drug is "for the frequently seen respiratory infection in the office and for a problem pathogen* in the hospital. *Staphylococcus aureus."

We emphasize that triacetyloleandomycin is to be used only for acute, severe bacterial infections where adequate sensitivity testing has demonstrated susceptibility to this drug and resistance to other less toxic agents. In view of the possible, but reversible, jaundice and hepatotoxicity of this drug, other less toxic agents should be used unless the organism is resistant to those agents, or in those cases where hypersensitivity precludes their use.

TAO is contraindicated in preexisting liver disease or dysfunction, and in individuals who have shown hypersensitivity to the drug.

The advertisement emphasized that no tooth staining has been reported after ten years of use of this antibiotic. The Food and Drug Administration regards this claim as an implied comparison suggesting that triacetyloleandomycin and tetracycline have a similar antibacterial spectrum of effectiveness, and that TAO has less toxic potential. Any such implication is not intended and, of course, would be invalid.

The advertisement referred to a research study in which patients were given triacetyloleandomycin prior to determining the susceptibility of the offending organism. Any suggestion that triacetyloleandomycin be used clinically without first determining susceptibility of the offending organism should be disregarded.



J. B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
235 EAST 42nd STREET
NEW YORK, N.Y. 10017

TAO®(triacetyloleandomycin)
Brief Summary

INDICATIONS: Include streptococci, staphylococci, pneumococci and gonococci. Recommended for acute, severe infections where adequate sensitivity testing has demonstrated susceptibility to this antibiotic and resistance to less toxic agents.

CONTRAINDICATIONS: Contraindicated in pre-existing liver disease or dysfunction, and in individuals hypersensitive to the drug.

PRECAUTIONS: CAUTION: USE OF THIS DRUG MAY PRODUCE ALTERATIONS IN LIVER FUNCTION TESTS AND JAUNDICE. CLINICAL EXPERIENCE AVAILABLE THUS FAR INDICATES THAT THESE LIVER CHANGES WERE REVERSIBLE FOLLOWING DISCONTINUATION OF THE DRUG.

Not recommended for prophylaxis or in the treatment of infectious processes, which may require more than ten days continuous therapy. In view of the possible hepatotoxicity of this drug when therapy beyond ten days proves necessary, other less toxic agents should be used. If clinical judgment dictates continuation of therapy for longer periods, serial monitoring of liver profile is recommended, and the drug should be discontinued at the first evidence of any form of liver abnormality. When treating gonorrhea in which lesions of primary or secondary syphilis are suspected, proper diagnostic procedures, including dark-field examinations, should be followed. In other cases in which concomitant syphilis is suspected, monthly serological tests should be made for at least four months. When used in streptococcal infections, therapy should be continued for ten days to prevent the development of rheumatic fever or glomerulonephritis. The use of antibiotics may occasionally permit overgrowth of nonsusceptible organisms. A resistant infection or superinfection requires re-evaluation of the patient's therapy. In the event such occurs with this drug the medication should be discontinued, and specific antibacterial and supportive therapy instituted.

ADVERSE REACTIONS: Although reactions of an allergic nature are infrequent and seldom severe, those of the anaphylactoid type have occurred on rare occasions.

ROERIG Rx

J.B. ROERIG DIVISION
CHAS. PFIZER & CO., INC.
235 EAST 42nd STREET
NEW YORK, N.Y. 10017

The Month in Washington

(Continued from page 1011)

competing products may be a problem," he said.

"Data from the Georgetown work have been useful to the FDA, but it is completely unwarranted to reach any general conclusions about drug equivalency on the basis of these exploratory studies."

* * *

A retired Air Force medical officer, Maj. Gen. Theodore C. Bedwell, Jr., 59, has been appointed to the newly-established post of chief medical officer for the Medicare program. He will provide liaison with the medical profession.

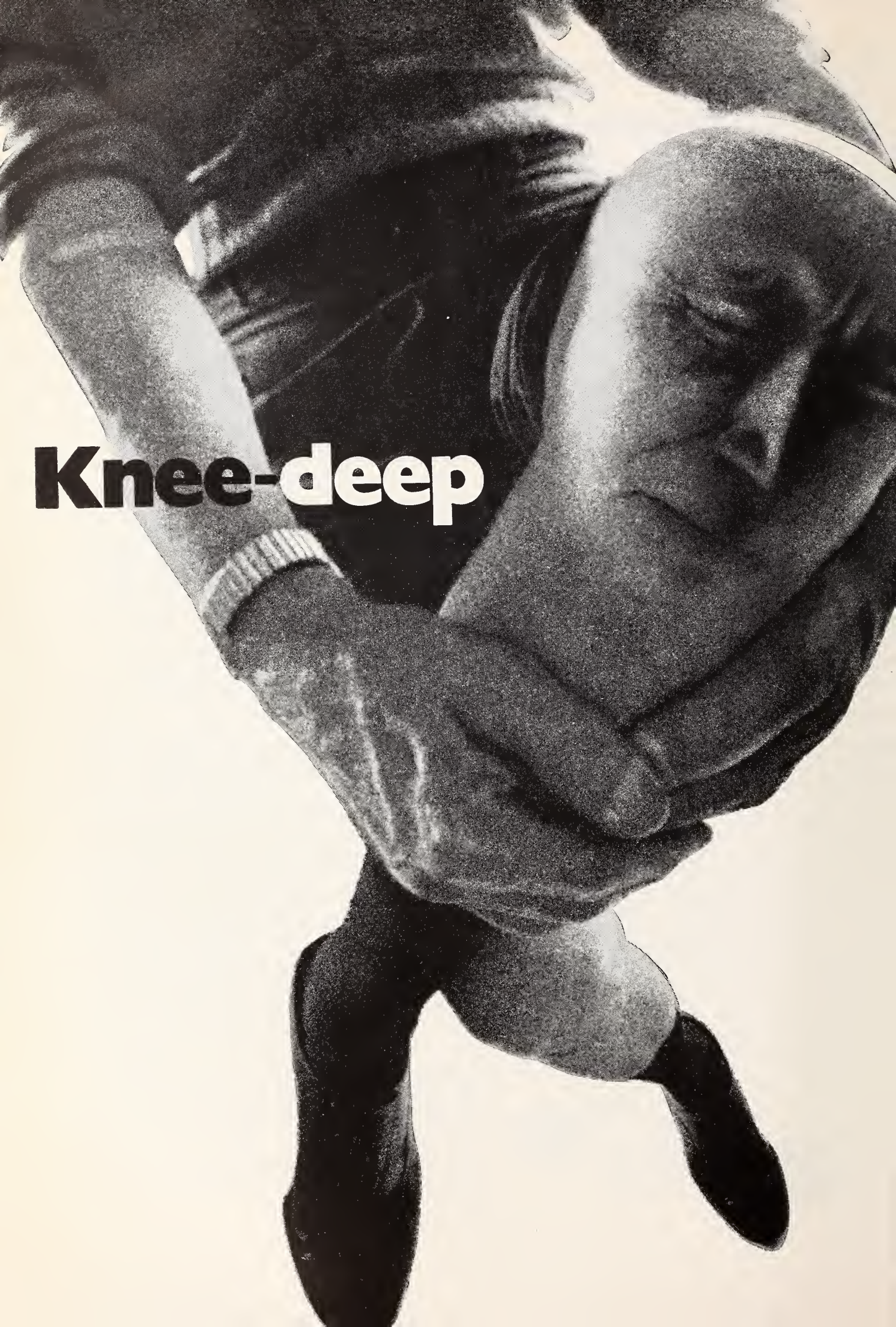
He most recently was director of staff in the office of the deputy assistant secretary of defense (manpower—health and medical). A native of Texas, he was graduated from Baylor University Medical College. A holder of the distinguished service medal, Dr. Bedwell received the American Medical Association's special aerospace-medicine citation in 1962.

Training Course for Emergency Squads, Etc.

The Chicago Committee on Trauma of the American College of Surgeons will sponsor its eighth 3½-day advanced practical course for ambulance attendants, firemen, policemen, emergency squads, safety engineers, public health workers and Civil Defense personnel at the Fire Academy of the City of Chicago, 558 DeKoven Street, on October 30 and 31 and November 1 and 2. Registrants should have completed the American Red Cross Advanced First Aid Course. The class is limited to 200 (All previous courses have been oversubscribed), and the $35 per man registration fee must be sent with each advance registration.

Three fourths of the 30 or more lecturers and demonstrators are medical-school faculty members and M.D.'s The topics are too numerous to list here, but they include resuscitation, recognition of and treatment for shock, care of eye injuries, dangers in handling patients with fractures, safe driving of ambulances, management of bleeding, extrication from cars, and legal problems in first aid.

For further information, address James F. Kurtz, M.D., 11255 West Seventy-fourth Street, LaGrange, Illinois 60525.


Knee-deep

in osteoarthritic pain

If aspirin doesn't help, move in
ith Tandearil.

The trial period is brief: 1 week.
ry one tablet q.i.d. at first. Tandearil
sually starts working within 3 to 4 days.
Vhen response occurs, as little as 1 or
tablets daily may hold back pain and
tiffness, and increase joint motion.

On the next page is a summary
f adverse reactions, contraindications,
arning and precautions.

Tandearil.
It can help get his mind off his knee.

Please review full Prescribing Information carefully before prescribing.

For osteoarthritic knees, spines, shoulders, hips, etc.:

Tandearil®
oxyphenbutazone

ndearil, oxyphenbutazone:
r brief summary see next page.

Geigy

TA-6006



Tandearil®
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: This drug is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy, and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response.

Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

(B)R-46-800-A

For complete details, please see full Prescribing Information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502



"All Registered Nurses are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests: they all have to measure up to the same standards. Therefore, all registered nurses are alike.

That's nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all registered nurses aren't alike, either.





Geigy



Regroton®

chlorthalidone 50 mg.
reserpine 0.25 mg.

One Regroton tablet a day usually helps you and your patient bring high blood pressure down and keep it down.

Regroton produces a smooth, long-acting effect that usually reduces both systolic and diastolic pressures. At the same time it often acts to allay anxiety and nervous tension associated with hypertension.

Although Regroton is generally well tolerated, adverse reactions may occur. This drug is contraindicated in mental depression, demonstrated hypersensitivity, and most cases of severe renal or hepatic diseases. For a complete list of side effects, please see the Prescribing Information summarized on the following page.

Regroton®

chlorthalidone 50 mg.
reserpine 0.25 mg.



One Regroton tablet a day usually helps you and your patient bring high blood pressure down and keep it down.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers. **Precautions:** Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000.
(B)46-600-C

For details, please see complete prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

RE-6225

Dilantin®
(diphenylhydantoin)

PARKE-DAVIS

In untold thousands of epileptic patients... Dilantin has been, and continues to be, the bedrock of therapy.

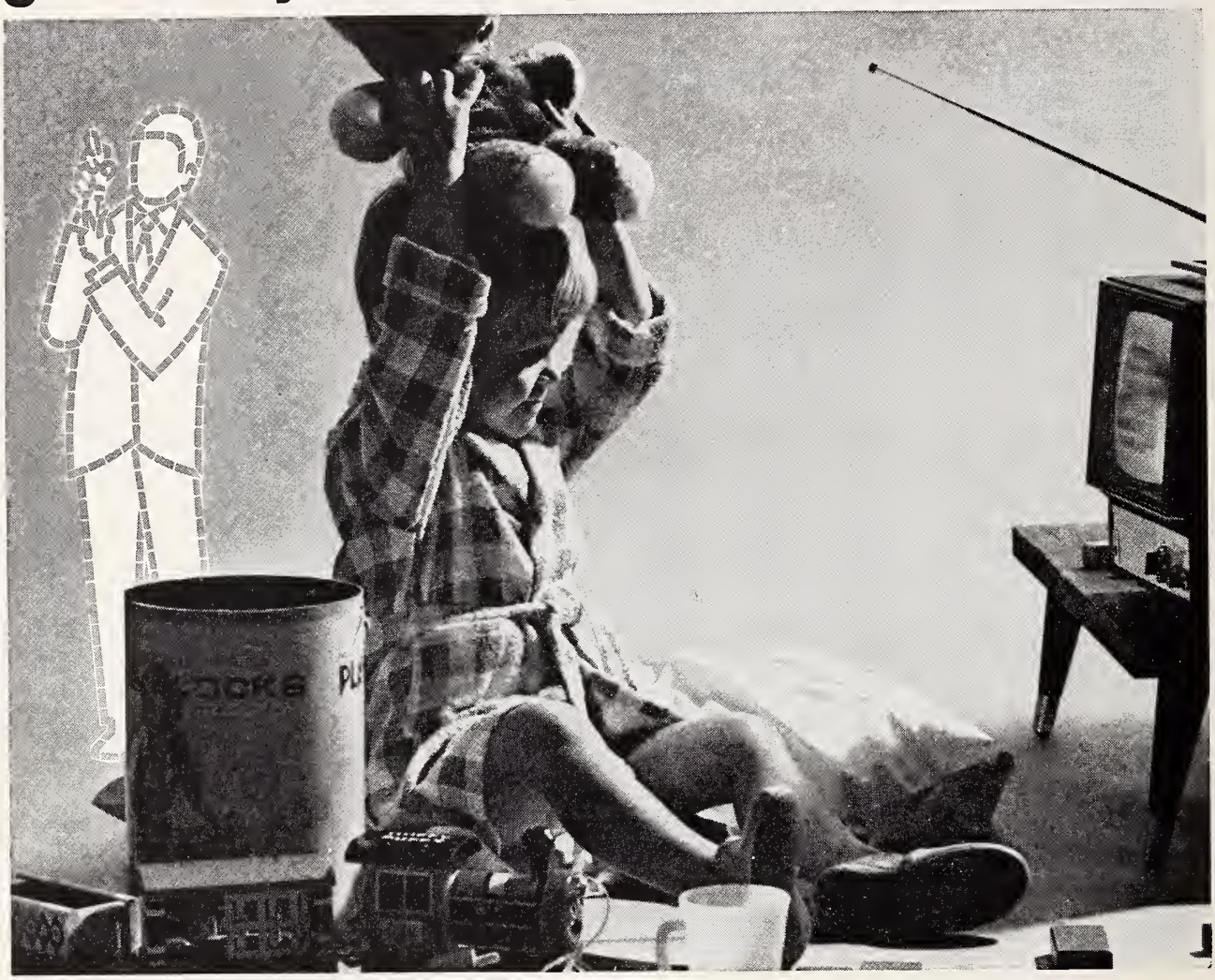
DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
Parke, Davis & Company, Detroit, Michigan 48232

The color combinations of the banded capsules are Parke-Davis trademarks. The orange-banded white capsule identifies Parke-Davis 0.1 Gm. diphenylhydantoin sodium; the pink-banded white capsule 0.03 Gm. diphenylhydantoin sodium.

PARKE-DAVIS 015R67



It's almost as if you were there to give an injection of penicillin



dependable oral penicillin therapy V-Cillin K®, Pediatric

Potassium Phenoxymethyl Penicillin

Description: V-Cillin K, the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly), combines acid stability with immediate solubility and rapid absorption. Higher, more rapid serum levels are obtained than with equal oral doses of penicillin G.

Indications: Streptococcus, pneumococcus, and gonococcus infections; infections caused by sensitive strains of staphylococci; prophylaxis of streptococcus infections in patients with a history of rheumatic fever; and prevention of bacterial endocarditis after tonsillectomy and tooth extraction in patients with a history of rheumatic fever or congenital heart disease.

Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: Usual dosage range, 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, 50 mg. per Kg. per day divided into three doses.

See package literature for detailed dosage instructions for prophylaxis of streptococcus infections, surgery, gonorrhea, and severe infections.

How Supplied: Tablets V-Cillin K® (Potassium Phenoxymethyl Penicillin Tablets, U.S.P.), 125 mg. (200,000 units), 250 mg. (400,000 units), and 500 mg. (800,000 units).

V-Cillin K® (potassium phenoxymethyl penicillin, Lilly), Pediatric, for Oral Solution, 125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. of solution (approximately one teaspoonful). [042567A] 800197

Additional information available to physicians upon request.

Eli Lilly and Company, Indianapolis, Indiana 46206

Lilly

Medicine in Vietnam

JAMES E. WHITMIRE, M.D.
Sumner

I am not going to give you a long talk on Vietnam, but I hope to give you a little background information on the Volunteer Physicians for Vietnam program. As you know, the American Medical Association has taken on this project for the purpose of helping to relieve the human suffering incident to war.

South Vietnam has a population of about 17,000,000 people. There are in South Vietnam about 1200 licensed M.D.s and some 700 of them are in the Vietnamese armed services. Some of the others are in public health or other administrative positions. Thus approximately one M.D. remains available for every 45,000 civilians.

To alleviate this situation partly the AMA has assumed the responsibility of staffing 16 of the province hospitals with volunteer physicians from America. This staffing is on a rotation basis, with replacements every two months. Those who volunteer and are accepted are all doctors who have active practices at home and have difficulty in leaving.

There is a great need in Vietnam for general surgeons, internists, general practitioners, pediatricians, ophthalmologists, orthopedic surgeons and urologists. To the best of my knowledge there is no one in Vietnam doing transurethral prostatectomies.

The work load is heavy, but you will find it interesting and rewarding. The operating rooms are fairly well equipped and the anesthesia is not bad. A very large proportion of the surgery below the diaphragm is done with spinal anesthesia or nerve block. For head, neck and chest surgery, endotracheal inhalation anesthesia is used. The wards are another story. They are overcrowded. Men, women and children are all in the same wards. There are very few mattresses, few linens, and few lavatories or toilets. Woven straw mats take the place of mattresses. The advantage of these in the tropics is that they provide better ventilation, and they can be hosed off, dried and used again. The nurses on the wards are expert at intravenous infusions and give injectable medications well. The routine feeding, bathing, bed-pan care, and oral medication are largely left to friends or relatives.

You will see all the usual diseases we see here, and in addition you will see Asiatic cholera, bubonic plague, leprosy, malaria, amebic dysentery, typhoid and intestinal parasites. You will see many traffic accidents; in fact in ordinary times the Hondas kill more people than the Communists.

The war injuries we saw at Nha Trang had in 90 per cent of the cases been inflicted by the Vietcong in their terror campaign in the surrounding countryside. They were brought in from as far as a hundred miles away—people wounded by booby traps, Claymore mines in the roads and trails, and deliberate shooting at farmers as the enemy soldiers marched past the fields.

The patients are cooperative and grateful. The wounded Vietcong who are brought in are treated just like any other patients, much to their surprise. They were indoctrinated with the idea that they would be tortured and killed if they were captured by the Americans. Most of them request to stay, and they are allowed to do so. Two of our best orderlies were ex-Vietcong. One of the ambulance drivers who came for us at night for emergencies at the hospital, and drove us through the worst part of the city was one of them, and I was never

* In early August, on what Dr. Smith intended to be a brief furlough in the States, he was taken ill and has been hospitalized in Des Moines with an ailment which seems to have started as amebic dysentery but has not yet been definitely diagnosed.—Editors

apprehensive about riding alone with him in the middle of the night.

One striking feature of the work there is the complete lack of neurotics and hypochondriacs. In fact Dick Keiger, a California psychiatrist who went to Nha Trang with me, was told that he would be assigned to internal medicine because they had no work for him in his specialty. Incidentally, he did an excellent job on the medical wards.

My good friend Elmer Smith, who went over with me, is back in Vietnam now as a coordinator for the A.I.D. public health program.* He is an excellent man for the job, for he is capable, dedicated, and very well liked by the Vietnamese and the Americans there, just like he has been here at home.

In conclusion I want to tell you that the work of the American doctors in Vietnam will have a most favorable impact and will be remembered long after the war is over. I am confident that if we see it through, Vietnam will soon be a great and prosperous country and a firm ally. It has a tremendous potential in agriculture and in the spirit of its people. They are keen, intelligent and alert, and they have a good sense of humor in spite of over 20 years of war. Their reaction to the Tet offensive was a tremendous demonstration of loyalty to the Americans.

The Iowa Regional Medical Program Is Ready to Enter the Operational Phase

W. A. KREHL, M.D., Ph.D.
Iowa City

THE ULTIMATE MEASURE of success of the Regional Medical Program will be a reduction in morbidity and mortality of heart disease, cancer, and stroke. At this point in time it is not feasible to point to distinct success in this basic objective. However, steps have been taken. The Regional Medical Program in Iowa, in a period of about one year of operational planning and assessment of resources, is ready to embark on a systematic and organized program or activity, designed to hasten the translation of validated clinical research knowledge to the patient's bedside.

The following program proposals have been developed and approved for submission to the National Institutes of Health by the Iowa Regional Advisory Group:

(1) *A Central Treatment, Educational and Demonstration Facility for the Comprehensive Management of Patients With Cerebrovascular Disease (Stroke).*

This facility will be established within the Department of Neurology and located in the University Hospital. It will have the following functions:

a. The establishment of a model and demonstration unit for the diagnosis and management of patients with cerebrovascular disease.

b. The establishment of an educational and care program and a program of advanced nursing management for patients with cerebrovascular disease as an integral part of the stroke facility.

c. The establishment of a stroke rehabilitation unit in collaboration with the stroke facility.

d. The establishment and maintenance of a formal undergraduate and postgraduate educational program concerning cerebrovascular disease for the medical, rehabilitation, and nursing personnel of the Iowa Regional Medical Program and other interested personnel.

e. The establishment of a cerebrovascular-disease outpatient clinic.

f. The establishment and maintenance of a central stroke registry as a part of the

stroke facility for the Iowa Regional Medical Program.

g. The establishment of a clinical and experimental research program in the facility.

h. The preparation of a quarterly bulletin concerning stroke for the participants in the Iowa Regional Medical Program.

(2) *A Comprehensive Program in Cerebrovascular Disease Management (Stroke).*

The program is to be administered through an affiliated organization, the Iowa Heart Association, and is designed to bring the latest developments in the treatment, care and rehabilitation of stroke patients to practicing physicians and other medical and health personnel through the development of community-based stroke teams. The stroke team will be headed by a physician and will include members of other health disciplines as needed in the treatment of cerebrovascular disease, and as available in the community.

(3) *A Training Program in Cardiopulmonary Resuscitation.* (Also to be administered by the Iowa Heart Association.) The primary objectives of this program will be:

a. To train and retrain all approved groups in CPR methods, at intervals.

b. To establish the community hospital as a training center for all approved groups.

c. To assist hospitals in establishing emergency resuscitation measures for inpatients (among whom the greatest salvage rate can be expected) and for victims of cardiac arrests as they are being admitted.

d. To establish uniform standards of training for all approved groups according to the recommendations made by the National Research Council of the American Heart Association.

e. To conduct a controlled pilot project among highly motivated select groups of lay personnel, in an effort to determine the feasibility and effectiveness of teaching such a program to the general public.

f. To participate in demonstration studies to evaluate the effectiveness of specially equipped ambulances in administering cardiopulmonary resuscitation when the cardiac arrest victim must be transported a long distance.

(4) *A Program for Education and Training for Nurses and Physicians Responsible for the Operation of Intensive Coronary Care Units.*

The objectives of this program are:

a. To develop an educational, and experience training program for physicians and nurses who will have the ultimate responsibility for the operation of hospital-based intensive coronary care units throughout the Iowa medical region under the administrative supervision of the Iowa Regional Medical Program.

b. To develop a program concerned with the epidemiology of myocardial infarction.

c. To develop and provide an advisory service to hospitals in the region that might desire advice and guidance relative to the development of an intensive coronary care unit.

d. To evaluate the effectiveness of ICCUs as a life saving development.

(5) *Expanded Central Tumor Registry in Iowa.*

The objective of this program is to extend and enlarge the Iowa Central Tumor Registry through cooperative arrangements with all the hospitals in Iowa which care for patients with cancer. This program not only has demonstrated success in developing a sound system of cancer recording and patient follow-up, but has stimulated professional cancer education programs in the 22 hospitals which currently are participating.

(6) *Coordinated Out-of-Hospital Services for Heart, Stroke, Cancer, and Related Disease in Polk County—A Community Action Plan.*

This program will develop a comprehensive community plan for the extension and coordination of out-of-hospital services in order to provide living aids to patients suffering from heart disease, cancer, stroke and related diseases. This will be the continuation of a pilot project implemented in the Des Moines region by United Community Services two years ago.

(7) *Telephonic Transmission and Computer Analysis of Multi-Channel Electrocardiograms in the Iowa Region.*

This program will be a feasibility study to determine the technical, sociologic and economic feasibility of the long-distance transmission of electrocardiographic data via telephone lines.

(8) *Utilization of a Medical-Center-Based Mobile Intensive Coronary Care Unit in the*



After the picnic even Gramps Was a victim of intestinal cramps

Parepectolin for quick relief of acute diarrhea
...soothes colicky pain with paregoric*
...consolidates fluid stools with pectin
...adsorbs irritants with kaolin,
and protects intestinal mucosa

In elderly patients it is particularly important to stop the diarrhea fast. Parepectolin helps you control diarrhea promptly and gain the patient's confidence until etiology has been determined.

Parepectolin®

Each fluid ounce of creamy white suspension contains:
*Paregoric (equivalent) (1.0 dram) 3.7 ml.
Contains opium (¼ grain) 15 mg. per fluid ounce.
warning: may be habit forming
Pectin (2½ grains) 162 mg.
Kaolin (specially purified) (85 grains) 5.5 Gm.
(alcohol 0.69%)
Usual Adult Dose: One or two tablespoonfuls three times daily.

ROER RORER WILLIAM H. RORER, INC.
Fort Washington, Pa.

Management of Acute Myocardial Infarction in a Rural Urban Development.

The purpose of this program is to establish the usefulness of a mobile intensive coronary care unit in the management of acute myocardial infarction in an Iowa rural-urban area.

Other operational proposals will develop as planning continues.

Perhaps more important than the plans that have been made are the cooperative arrangements that have developed simultaneously with the plans. The staff of the Regional Medical Program hope to see the development of meaningful, cooperative relationships among all segments of the health-care team in the communities of this state, so as to perfect quality capabilities for the diagnosis, treatment and care of patients with heart disease, cancer and stroke.

The community must participate in the planning, development and implementation of any program designed for that community. With this conviction strong in mind, we want to focus upon 16 sub-regional areas through which operational activities may be tailored to meet the needs of each community. Our program implementation focuses on the community. We are working with other organizations to stimulate the formation of areawide health planning councils which will provide important emphasis to planning and implementation. Each community must, in its own way, evaluate its needs, determine its resources and then develop practical solutions to its own problems.

Plans, no matter how well conceived, are meaningless unless they can be translated into action. We are now ready to test the adequacy and stability of the cooperative arrangements that have been developed.

Coming Meetings

(Continued from page 1009)

ABROAD

Oct. 6	**Sixteenth Biennial International Congress sponsored by International College of Surgeons, Tokyo, Japan.**
Oct. 8-11	**5th Interntional Congress of Hygiene and Preventive Medicine, Rome, Italy.**
Oct. 12-20	**World Psychiatric Association, 1st International Congress, Milan, Italy.**
Oct. 18-20	**American Association for the Surgery of Trauma, Montreal, Canada.**
Nov. 5-8	**Eighth Clinical Congress of Israel Surgical Society, Jerusalem.**
Dec. 1-7	**12th International Congress of Pediatrics, Mexico City.**
Dec. 7-9	**First National Conference on Infectious Diseases, Bombay, India.**

Scientific Articles

The Diagnosis and Treatment of Occlusive Vascular Disease: Radiologic Aspects

L. L. MAHER, M.D.
Des Moines

THE RELATIVE EASE with which information can be obtained concerning the lumen calibers of nearly all major blood vessels of the body will be described and discussed briefly.

It seems safe to say that the greatest advances in diagnostic radiology over the past 10 years have occurred in vascular studies. These have happened both as a result of new, very well tolerated contrast media and as a result of concomitant advances in vascular surgery. Today it is possible for us to opacify and film all major vessels, using only a small amount of local anesthestic and causing very low morbidity and mortality.

The experience in this area of practice in a private community hospital constitutes the basis for this report, and it is being presented to encourage wider application of the procedures. I shall consider groups of vessels and individual vessels, beginning at the aortic valve and progressing downward with the flow of blood.

This presentation and the one by William H. Myerly, M.D., which follows it, constituted the Arthur Erskine Memorial Lecture at the 1967 Annual Meeting of the Iowa Medical Society.

CORONARY ARTERIOGRAPHY

To begin, the coronary arteries can be catheterized selectively by means of catheters inserted into the femoral artery following percutaneous arterial puncture (the Seldinger technique).[1] Catheters specially shaped for the respective coronary orifices make this procedure relatively simple, and thus facilitate excellent opacification of both right and left coronary arteries. This opacification is seen down to and through the capillary phase, as well as through venous reaccumulation manifested by visualization of the coronary sinus at the end of the sequence.

We use cinefluorography as well as rapid-sequence film changers. The indications are many, but briefly they include coronary insufficiency susceptible of surgical correction, and coronary artery disease which cannot be established with certainty by other methods but which has been suggested by the patient's symptoms. Coronary arteriography necessitates somewhat more sophisticated equipment and setup than do any other kinds of arteriography.

MAJOR VESSELS ARISING FROM THE ARCH

As we proceed distally, the next aortic branches are the four major vessels arising from the arch, and they are usually studied as a group, although individual evaluation is certainly possible by means of selective catheterization. Where there are neurologic symptoms and findings of stroke, ranging from transient and/or minor motor and sensory changes to full-blown and complete hemiplegia, a vascular study may be indicated. When symptoms are less than complete and when a bruit can be heard over one or both of the carotid arteries in the neck, the study is particularly necessary. A variation in intensity of the carotid pulses on the two sides likewise should arouse suspicion, as should a significant variation in blood pressure between the patient's two upper extremities.

The radiologic approach to such problems involves placing a catheter tip in the ascending aorta. One does this by passing the catheter into the femoral artery, using the Seldinger method, and then passing it retrograde under fluoroscopic control until the tip is in the ascending aorta, just a short distance above the aortic valve. At that point, a test injection of 10-15 cc. of contrast medium is injected manually, while the tip of the catheter in the ascending aorta is viewed fluoroscopically. This monitoring insures that the catheter tip is free in the aortic lumen and not within a branch vessel or perforating the intima. When free flow from the tip has been assured, 50 cc. of contrast medium is delivered through the catheter by means of a power injector. Rapid serial films are made, recording the appearance of the lumens of the aortic arch and of the four major vessels arising from it. The vessels are well demonstrated, from their origin up to the base of the skull (Figure 1).

The areas that atheromatous disease most often involves are the origin of one of these vessels where it arises from the aorta, and a point of bifurcation, most frequently where the common carotid divides into the internal and external carotids. Disease at the bifurcation of a common carotid is probably the commonest atheromatous lesion occurring in this group of vessels. It can very readily and effectively be treated surgically. Even when the radiographic

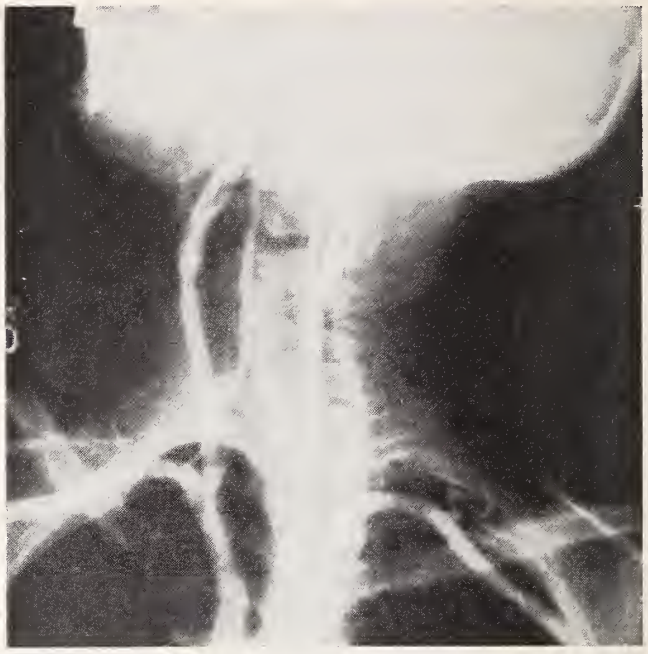


Figure 1. A normal four-vessel aortic arch study. Both vertebrals are well demonstrated. The bifurcation of the left common carotid is clearly seen. Better evaluation of the bifurcation of the right common carotid would necessitate a second injection, with the face turned to the left.

evidence suggests complete occlusion of an internal carotid artery, surgical correction often can reestablish flow through the vessel and to the brain.

Occlusive disease can involve the subclavian artery at any point, but again the area of most frequent involvement is the origin of the vessel —usually directly from the arch on the left and at the bifurcation of the innominate on the right. When disease results in complete occlusion of the very proximal portion of one of the subclavian vessels, the clinical manifestations may consist of light-headedness and vertigo, possibly transient visual disturbances and a significant difference between the blood pressures in the two arms. This constitutes the basis for the rather recently described "subclavian-steal syndrome,"[2] in which a pressure gradient causes blood to flow in a reverse direction through the vertebral artery and into the subclavian artery distal to its occlusive lesion. This, in effect, steals blood from the brain to supply the upper extremity, and causes symptoms of varying severity resulting from cerebral or cerebellar ischemia (Figure 2). This condition occurs in both the left and right subclavian arteries, producing the symptomatology described above. Dramatic relief of

symptoms follows correction of the proximal subclavian occlusion.

Disease of the vertebral arteries themselves, or of the basilar artery formed by the confluence of the vertebrals, can readily be assessed. We feel that Seldinger's is the simplest approach, from the standpoints of both the physician and the patient, and that it can regularly result in good visualization of either or both vertebral arteries. Great asymmetry has been shown to occur in vertebral-artery caliber from side to side. Limitation of flow through one or the other vertebral artery as a result of atheromatous disease may be manifested by visual disturbance due to posterior cerebral ischemia, as well as by disturbance of balance as a result of cerebellar ischemia. Arch opacification may suffice in evaluating the vertebrals, but if not, selective catheterization of one or both subclavians can usually be accomplished.

Occlusive disease of the descending thoracic aorta and its branches is of relatively little clinical interest until the vessel passes through the diaphragm and into the abdomen.

EVALUATION OF VESSELS ARISING FROM ABDOMINAL AORTA

The first major vessel to arise from the abdominal aorta is the celiac trunk. Generally speaking, occlusive disease of this vessel or of one of its primary branches, as well as disease of the superior and inferior mesenteric arteries, seldom produces clinically recognizable symptomatology. Abdominal angina is a recognized entity. However, because of the free anastomosis about the organs supplied by these three major abdominal vessels, symptoms resulting from localized, surgically-correctable disease occur infrequently. One can opacify all of these vessels by delivering a bolus of contrast medium in the low thoracic aorta, and filming as it is carried down. However the result is a profusion of opacified abdominal arteries, and film interpretation is insufficiently precise to be of much help in planning surgical treatment. Better, more precise information is obtained by selective catheterization of the celiac trunk, the superior mesenteric artery and the inferior mesenteric artery. By this means one can film each vessel individually. Lateral projections also can be obtained, and often they will provide critical information regarding the proximal portion of these major trunk vessels.

RENAL ARTERIOGRAPHY

The renal arteries, of course, have been shown to be very susceptible to occlusive dis-

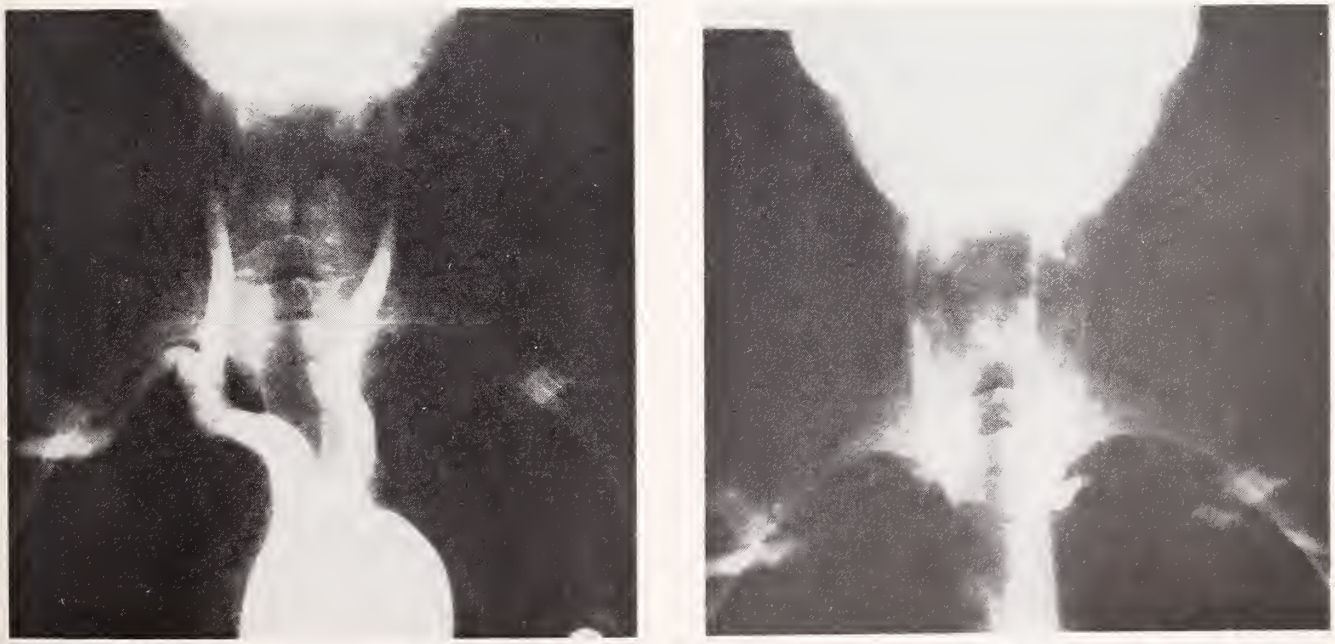


Figure 2. A. The early phase of a four-vessel arch study, showing occlusion of the left subclavian at its origin. Both carotids as well as the right subclavian and right vertebral can be seen. B. This film, made two or three seconds later in the sequence, shows the left vertebral wall opacified, and the left subclavian is now opacified. The other vessels are nearly cleared, and the left vertebral has "stolen" blood and contrast medium from the circle of Willis. The left subclavian occlusion is shown to be short and localized.

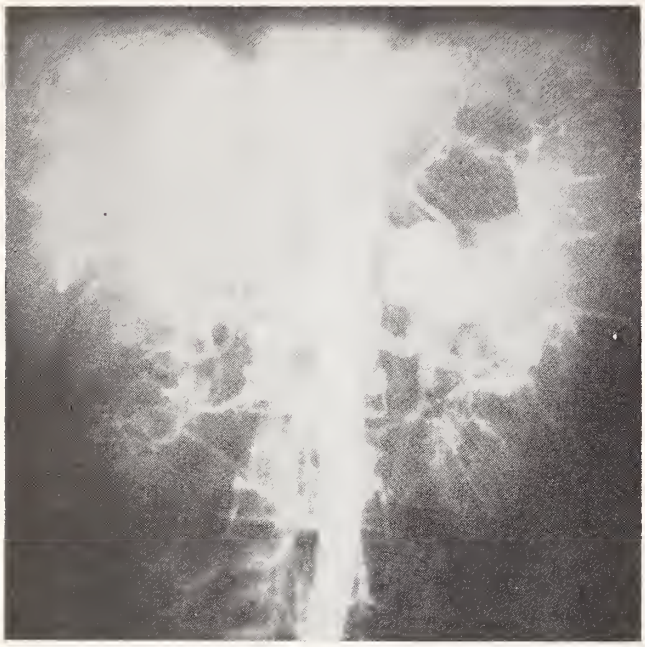


Figure 3. A "bolus" study of the renal arteries. The renal arteries can be identified, but there is much confusion in consequence of the opacification of celiac-trunk vessels as well. This examination was done in an attempt to evaluate the superior pole of the left kidney for a suspected mass lesion in a patient with polycythemia. A greatly dilated and tortuous splenic artery badly obscured the area in question.

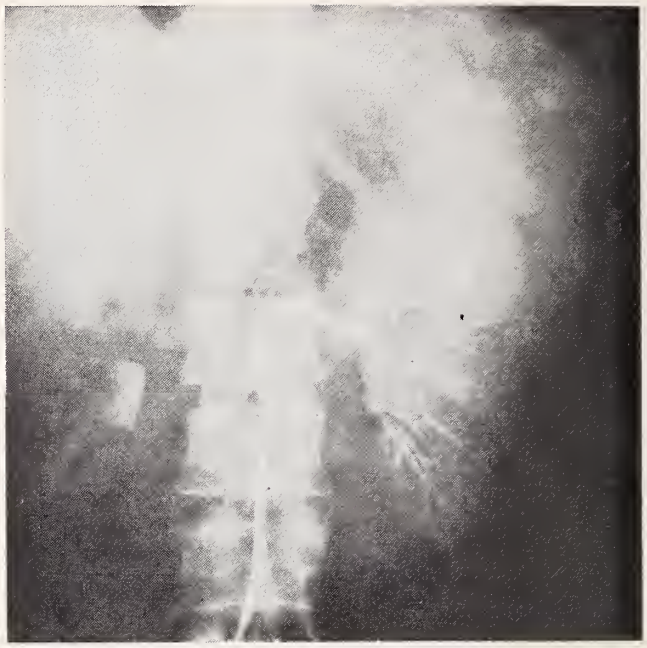


Figure 4. Selective catheterization of the left renal artery resulted in this film, which afforded thorough visualization and evaluation of the renal vasculature and excluded a mass lesion. Excretion of medium by the right kidney was the result of the bolus study shown in Figure 3.

ease, not all of which is atheromatous, and amenable to surgical correction.

The onset of hypertension is a frequent clinical manifestation of occlusive disease of one of the renal arteries. The recent onset of hypertension in a previously normotensive patient, with or without the finding of a bruit in the abdomen, should prompt intravenous pyelography. Early rapid-sequence films are made in an effort to demonstrate a differential between the blood-flow volumes to the two kidneys. Various other forms of split-function tests are done too, but usually it is necessary or preferable to do renal arteriography for specific information regarding blood flow to and within each kidney.

The renal arteries are very well demonstrated if one delivers the contrast medium in the abdominal aorta at about the level of the superior pole of the left kidney. This often is sufficiently definitive to complete the study. It also demonstrates aberrant or multiple renal arteries, if any are present. It may be inconclusive, however, because the opacification of other abdominal arteries may interfere with good visualization of the renal arteries, particularly the parenchymal branches (Figure 3). If so, selective catheterization of either or both renal arteries is easily accomplished. Films are made during and after the manual injection of relatively small amounts of contrast medium (Figure 4).

VASCULAR STUDIES IN THE LOWER ABDOMEN AND LEGS

The abdominal aorta itself often shows atheromatous disease varying from minimal irregularity of the outline of the lumen to complete occlusion (Figures 5A and 5B). As a rule, the more distal portions show greater degrees of involvement. Occlusive disease of the distal abdominal aorta usually continues into the proximal common iliac vessels, down to and including one or both hypogastric vessels. This type of involvement results in Leriche's syndrome[3] of hip and gluteal claudication, and impotence in the male. Where clinical findings and symptoms point to the presence of occlusive vascular disease like that described above, the usual Seldinger approach to the femoral artery is not attempted. Disease causing such symptoms interferes with the retrograde pass-

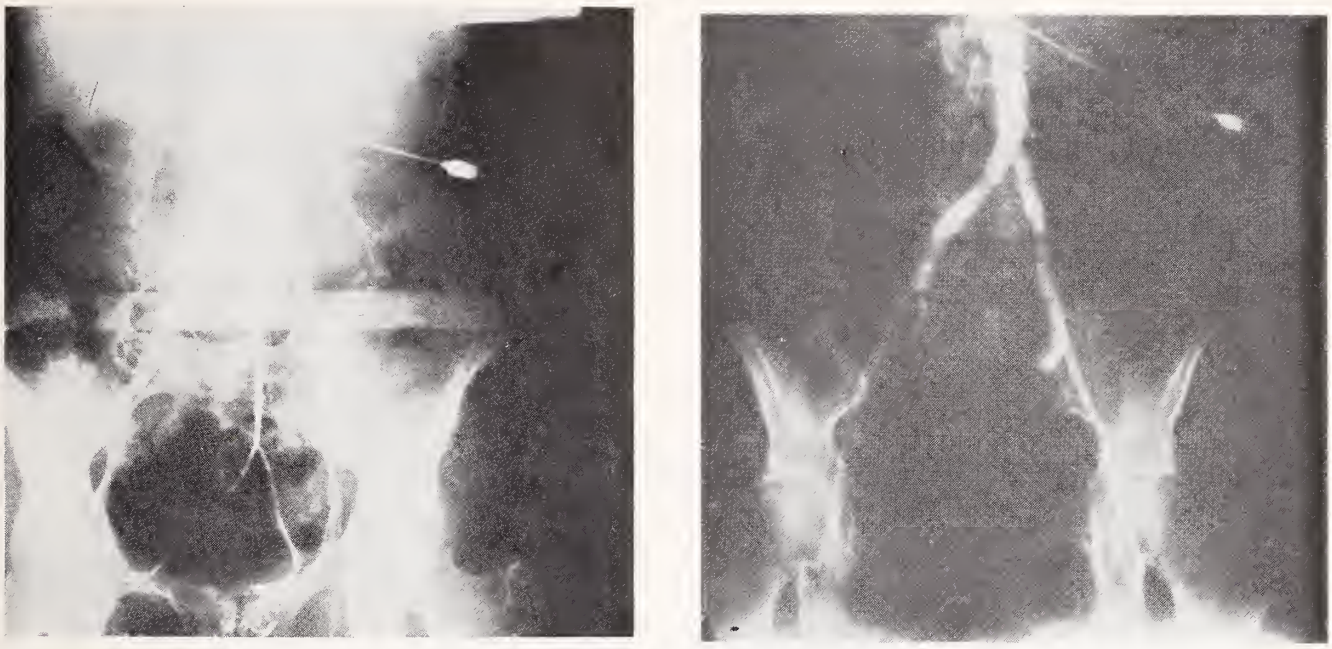


Figure 5. A. A translumbar aortogram done in 1966, showing complete occlusion of the distal abdominal aorta. Collateral circulation is prominent, especially the inferior mesenteric. Run-off films made with this examination showed very healthy, though poorly opacified, superficial and deep femoral arteries filled by this collateral circulation. B. Reexamination of the same patient over one year later showed that the "Y" graft which was inserted after the 1966 examination was functioning very well, and the hypogastrics were well opacified bilaterally.

age of the catheter into the upper abdominal or thoracic aorta. Two alternate approaches are open. By means of the Seldinger technique, a catheter can be passed into the upper thoracic aorta through one of the axillary arteries, and contrast material can be delivered by that route, or translumbar aortography can be carried out. The latter technique necessitates general anesthesia and endotracheal intubation. The patient is positioned prone on the x-ray table, and a needle is passed through the lumbar muscles into the abdominal aorta. Contrast medium is then delivered, and films of distal vessels are obtained.

The common iliac artery divides into the hypogastric artery and the external iliac artery. The latter continues through the pelvis and enters the thigh, where it becomes the femoral. The femoral then divides into the superficial and the deep branches. The latter two vessels are susceptible to occlusive disease—particularly the superficial femoral. Disease affecting these vessels is manifested clinically by diminished pulsations along their course and by varying degrees of claudication with exercise. Such disease can be shown on run-off films made by an axillary Seldinger approach, a translumbar approach, or a simple femoral-artery puncture. The last of these is not done unless there is good evidence in the clinical history, as well as in the palpable integrity of the femoral pulses on each side, that there is no significant occlusive disease above. To demonstrate occlusive disease between the inguinal ligament and the knee, and to subject the patient to surgical treatment without being reasonably certain of the adequacy of blood flow through the abdominal aorta would be inexcusable.

SUMMARY

This, then, completes my discussion of radiologic diagnosis in the sequence of vessels arising from the aorta. In summary, the Seldinger technique affords a safe and reliable means of placing a catheter within the aorta. Access is gained through either axillary artery or through either femoral artery. The leading ends of the catheters can be preshaped to permit selective catheterization of any of the major arteries from the aorta, and rapid-sequence films or cinefilms can be made to record the

appearance of these vessels and their subsequent branches during an injection of contrast medium. There is a good correlation between the roentgen appearance of these opacified vessels and the operative findings. Surgery is very effective in treating occlusive disease in all of the various areas that have been discussed.

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Diagnosis and Treatment of Occlusive Vascular Disease: Surgical Aspects

WILLIAM H. MYERLY, M.D.
Des Moines

MY PURPOSE in speaking to you today is to inform you about the procedures we use in vascular surgery, without getting too involved with the details. More particularly, my purpose is to tell you what happens to the patient *after* a surgeon has treated his lesion or obstruction, and what the short- and long-term follow-ups may reveal.

My series of cases is not particularly large. We did the first vascular surgery at Iowa Methodist Hospital, Des Moines, in 1958. We got off to a slow start, but over the years cases have become more and more plentiful.

Dr. Maher has covered the diagnostic indications. The only thing I might add to what he has said on that topic is that a surgeon should take a good history and should palpate the pulses in the patient's extremities. If one cannot feel pulses in the extremity that is causing the patient pain, then an x-ray examination is indicated.

As to the procedures that are available to the vascular surgeon, the first consists of resection and replacement of the artery with either a plastic vessel made of Dacron or Teflon, or with a vein such as the great saphenous vein.

A second technique is the by-pass graft. In other words, we leave the diseased artery in place, go above the diseased area, hook a plastic tube or vein into the side of the artery, then carry it below the site of obstruction and attach it again into the side of the artery, thus by-passing the obstructed area.

The third technique is endarterectomy, which includes opening the artery and literally peeling out the intima and diseased media—a procedure somewhat resembling the peeling the center out of an onion. There is a cleavage plane, and with very little work one can easily find and actually remove the obstructing segment, leaving essentially the adventitia of the vessel behind to carry the blood. Generally speaking, it works very well. Sometimes these vessels are scarred and their caliber is severely reduced. In such a situation we may do an endarterectomy and then make the caliber of the vessel larger by using what we call a patch (a segment of vein or a piece of plastic) to enlarge the caliber of the vessel. Finally, I have found on several occasions when it was

This presentation and the preceding one by L. L. Maher, M.D., comprised the Arthur Erskine Memorial Lecture at the 1967 Annual Meeting of the Iowa Medical Society.

difficult to do anything else, that one can literally dilate the artery by avulsing the muscularis. One does this by clamping the artery above and below the involved segment, and injecting the occluded segment with saline. This dilates the artery, avulsing the muscle and enlarging the caliber of the artery. On several occasions I have increased the caliber of vessels in this manner, with good results.

SURGERY FOR CAROTID ARTERY OBSTRUCTION

Considering the first common carotid artery bifurcation, I can say it has been found, generally, that an atherosclerotic plaque develops at or just distal to the bifurcation of this vessel, a plaque which obstructs both the internal and the external carotid arteries. Obstruction of the internal carotid, of course, is far more serious than obstruction of the external. An x-ray examination of these arteries very adequately reveals to us whether an obstruction exists, and its extent. If the history and the x-ray examination indicate that a surgical procedure should be performed, one again has a choice among the three different techniques previously mentioned. During the course of anesthesia, we give the patient carbon dioxide until we get a high carbon dioxide level in the blood. This sufficiently increases the collateral circulation to the brain so that we can clamp off the common carotid artery and work at leisure in repairing the internal carotid vessel. Practically always, an endarterectomy is the treatment of choice, and the usual specimen is approximately one-half to three-quarters of an inch in length, and may be almost entirely occlusive.

At times, if we are concerned as to the adequacy of blood flow to the brain during this procedure, we introduce a by-pass to carry blood around the operative site during the actual endarterectomy of the vessel. A plastic tube is introduced into the common carotid artery below, and then is reintroduced into the internal carotid artery above the obstruction. This allows one to work with more leisure and security, and to repair the vessel more accurately.

A total of 35 patients have been operated upon for carotid-artery obstruction, but the total number of operations has been 42, for some patients have had surgery on both carotids. The average length of follow-up has been 27 months, and the longest follow-up has been seven years. There has been one hospital death, and a second patient died approximately two years after surgery. Thus 33 patients, to date, are alive and well.

VERTEBRAL AND INNOMINATE ARTERY OBSTRUCTIONS

I have seen one patient with stenosis of the vertebral artery at its origin from the right subclavian. It was repaired by putting a patch through the stenotic area, thus greatly increasing the caliber of the vessel, and the patient had a good result.

I have seen one case in which the innominate artery was obstructed at its distal end. The obstruction was approached by splitting the sternum, cutting the clavicle and doing an endarterectomy of the vessel. The patient had a good result.

We have seen two patients with the subclavian "steal" syndrome. In this situation the subclavian artery on either side may be obstructed at a point distal to the common carotid take-off, or distal to the aorta and proximal to the vertebral artery take-off from the subclavian. In both cases an anastomosis was made, joining the common carotid artery to the subclavian artery distal to the obstruction, thus reestablishing circulation to the arms. These patients have had good results.

SURGERY FOR AORTIC ANEURYSMS

Twenty-nine patients have been operated upon for aortic aneurysms. Twenty of them were elective cases, and nine were emergencies because of rupture of the aneurysm. One patient obstructed her graft 3½ years after it was put in, and it was necessary to operate on her again, remove the graft, and put in a new one. Thus our total has been 30 operations. Of the 20 elective patients, three are dead. One died of streptococcal pneumonia, one died of severe cirrhosis, and the third had an aneurysm starting from the diaphragm and running down through the iliacs. We replaced the entire aorta from the diaphragm down, but the patient died 48 hours later, apparently from pulmonary embolus. We operated on the nine ruptured aneurysms in emergency situations. We had three deaths, leaving a total of 23 patients who are, to my knowledge, alive and well.

AORTIC ILIAC DISEASE

We now come to aortic iliac disease, or Leriche's syndrome as it is called, involving the aorta. It frequently goes down the common iliacs to reach the hypogastric and even the external iliacs. In my experience this disease has attacked patients as young as 38 years of age. A total of 52 patients have been operated upon in a total of 59 procedures. The average follow-up time has been 39 months, the longest being eight years. Of the 59 operations, three were early failures. The patients were reoperated upon before they left the hospital. There were five late failures. There were two hospital deaths and a total of four amputations, three of which were in diabetics. At present there are 41 patients in this group who I should say have had good results.

OBSTRUCTIONS IN THE FEMORAL AREA

We now come to the femoral artery area. The femoral artery is giving me more trouble —and as a matter of fact is giving other vascular surgeons more trouble—than any other vessel. With the passage of time, I find that I am seeing patients who have had surgery for aortic aneurysms or have had aortic and common iliac endarterectomies, and who had normal appearing femoral or popliteal arteries at the time of that surgery. Sometimes as soon as a year afterward, but usually later, they return with renewals of symptoms which, on arteriography, are usually due to obstruction of the superficial femoral or the popliteal artery. The explanation, of course, is that the atheromatous disease has continued to progress, with the passage of time, and what x-ray previously had shown to be a normal artery is now obstructed. Thus this is a progressive disease.

In operating on the superficial or common femoral artery at the present time, I prefer to do either a great saphenous vein graft (by reversing the vein and using it as an end-to-side anastomosis to the femoral and popliteal arteries), thus effecting a by-pass type graft, or to do an endarterectomy of the whole length of the superficial femoral artery and the common femoral. Some years ago the vein-graft procedure was in disrepute, but after an increase in experience with the plastic artificial vessels, we are back again to vein grafts. So far my experience with a femoral endarterectomy over the entire length of the superficial femoral artery has been very encouraging. I do not feel that sufficient time has elapsed to permit a reliable assessment of the end result. In the femoral artery category we have had a total of 25 patients and have performed 47 operations. The discrepancy between those figures is accounted for by the fact that a few patients have been reoperated, and quite a few have had operations on both legs. The longest follow-up has been six years. There have been no deaths; the early operative failures have numbered two, and the late failures seven. For the late failures, I frequently found the reason was that the disease had progressed down the vessel beyond the graft. I have sewn in a graft to the mid-popliteal artery, finding the artery reasonably normal, and six weeks later, on reoperation, have been amazed to find how rapidly the disease process has occurred in a previously near-normal-appearing artery. Another reason for failure is a lack of patient cooperation. For example, one patient stayed in a kneeling position for a prolonged period, despite warnings to the contrary. Kneeling obstructed his graft, and he eventually had an amputation. There have been a total of four amputations in this series. Following femoral artery surgery, a total of 21 patients have had good results to date.

A total of 11 patients have had surgery limited to the popliteal artery. Three of them had ruptured popliteal aneurysms requiring surgery, and all have had good results. Of the remaining eight, six have had good results. One died of a coronary in the hospital, and one lost the arterial pulsation in his foot sometime after surgery, but thus far has not undergone another operation and has no evidence of gangrene.

RENAL ARTERY SURGERY

We have operated on the renal arteries in a total of four patients. One was a young lady who had an unusual muscular hyperplasia of the renal artery. Her postoperative result has been excellent. One gentleman had severe hypertension, and his blood pressure averaged 230/110 mm. Hg. Following renal endarterectomy his blood pressure has been constant at 120/80 mm. Hg throughout the past four years.

Another patient was a severe diabetic, and though we don't regard his result as excellent, his blood pressure was brought down from the neighborhood of 260 to 160 mm. Hg, systolic, following the surgery.

Overall, the 159 patients in our series have had a total of 175 operations. We are becoming more and more aware that occlusive vascular disease is progressive, and we find second operations becoming increasingly frequent in an area or an artery which previously had appeared normal. We have also noted that by increasing the blood flow to the legs, thus curing claudication, we are enabling the patient to increase his physical activity to the point where, for the first time, he notes angina! We have seen that on several occasions.

In general, however, I do not believe I have operated upon a group of people who are more appreciative of being able to resume their previous norms of activity.

SYMPATHECTOMY

Up to this time I have said nothing about sympathectomy. Of course there have been many patients on whom no definitive surgery could be carried out. In many such cases we have offered lumbar sympathectomies on one or on both sides, and the patients have accepted those operations. In approximately 75 per cent of the cases, the patients have had moderate to excellent relief from their symptoms. In general, I regard sympathectomy as a good operation when nothing else can be done.

Incidentally, it may interest you to know that of our 159 patients, just four *were not* cigarette smokers!

Finally, as Dr. Maher remarked, coronary arteriography is now being performed at Iowa Methodist Hospital. Some of you may know that Dr. Vineburg, of Montreal, first did that procedure some years ago by pulling the internal mammary artery through the myocardium over a distance of 1 or 1½ inches, thus revascularizing the cardiac muscle. We have used the Vineburg technique in two patients thus far. Those revascularizations have taken place just within the past month, and too little time has elapsed to permit a valid evaluation of them. For what it may be worth, however, I might report the short-term results. One of the patients who had been taking from 15 to 20 nitroglycerin tablets per day has dropped down to one or two per day, and the other patient, who had been taking between 30 and 40 nitroglycerin tablets per day, is now taking none! We hope that this operation may prove of considerable benefit as time goes on.

Physicians to Get Sample Copy of SAMA News

A complimentary copy of SAMA NEWS, an attractively printed newsletter published monthly during the academic year by the Iowa City chapter of the Student American Medical Association will be mailed to every IMS member during October. It is hoped that physicians will utilize the subscription blank that will be enclosed. The price per year is $2.00.

SAMA NEWS was initiated during the 1967-68 school year by a group of students with financial support from the local chapter of SAMA. Articles either are written by students or are elicited from others by students on the staff. Letters to the Editor are welcome from anyone.

SAMA and the staff of SAMA NEWS wish to establish a closer contact with practicing physicians in Iowa, and believe the newsletter may serve that purpose. SAMA NEWS will provide information concerning many items of interest in the medical school, including student-group activities, medical meetings, admission requirements, data on the entering freshman class, and financial aid available to prospective students.

In the last few years there has been great interest expressed in medical education and possible changes in curriculum. It is the opinion of the editor of SAMA NEWS that no one has more insight into medical education and its shortcomings than have the practicing physicians. From time to time SAMA NEWS will, in addition, poll its subscribers on such subjects as medical education and trends in medical practice.

Last, and most importantly, it is hoped that the physicians in the state will contribute to the newsletter in the form of original articles or Letters to the Editor.

The two-dollar subscription price hopefully will cover the publication and mailing costs. The medical students sincerely hope the physicians in the state will help in this endeavor by lending their support.

Treatment of Lymphomas With Antineoplastic Agents

S. FRED BRUNK, M.D.
Iowa City

When the diagnosis of Hodgkin's disease, lymphosarcoma or reticulum cell sarcoma is established by biopsy, it becomes important to define the extent of the disease. One must do this both to estimate the prognosis and to choose the appropriate treatment. Initially accurate staging is particularly essential in Hodgkin's disease, but it is also valuable in the other lymphomas. This article is designed to review briefly the antineoplastic agents that are useful in treating these lymphomas, and to present a practical scheme for using these drugs effectively.

INITIAL EVALUATION

Suggested studies for the initial work-up include a complete blood count, a chest x-ray (with chest tomography if there is enlargement of mediastinal nodes), an intravenous pyelogram, bilateral lymphangiograms (unless contraindicated), a skeletal survey (to include at least the thoracolumbar spine and pelvis), a needle biopsy of the bone marrow, an alkaline phosphatase, a bromsulfalein retention, a blood urea nitrogen and a serum electrophoresis. If the alkaline phosphatase or the BSP is abnormal, a biopsy and a scan of the liver should be considered. If bone involvement is suspected clinically and the x-rays are negative, a bone scan may be of value.

STAGING

The staging for Hodgkin's disease that has been proposed for international acceptance is as follows: Stage I—disease limited to one anatomic region (Stage I_1), or to two contiguous anatomic regions (Stage I_2); Stage II—disease in more than two contiguous anatomic regions or in two noncontiguous regions on the same side of the diaphragm; Stage III—disease on both sides of the diaphragm but limited to the nodes, spleen and Waldeyer's ring; and Stage IV—disease that involves extranodal tissues in addition to nodes. All stages are subclassified as A or B to indicate the absence or presence of fever, night sweats or generalized pruritus.

CHOICE OF THERAPY

Radiation therapy is potentially curative in cases of localized or regional disease. Stages I and II lymphomas should be treated with radiation in a curative attempt. The tumoricidal dose of radiation therapy is estimated to be 4,000 rads delivered during about four weeks. Following that dosage, the recurrence rate in the irradiated area is less than 5 per cent.[3] At present, in many centers, local and regional disease is treated with 3,500 to 4,000 rads both to clinically involved nodes and to contiguous node areas. Whether or not there is additional benefit in irradiating contiguous nodes is currently under study. Also under investigation are "curative" doses of radiation for Stage III Hodgkin's disease. The long-term results of "curative" radiation therapy in generalized disease are not yet available. In Stages I and II of the disease, the presence of systemic symptoms does not preclude the use of radiation therapy in hopes of a cure. The use of a combination of intensive radiation therapy and chemotherapy for Stages I and II of the disease is being studied in some centers, but that technique remains investigative at this time.

Chemotherapy is a palliative measure in generalized disease. It should not be used alone in Stages I and II, for it may deny the patient

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a chance for cure. Several effective drugs are available. Judiciously used, these agents may provide excellent palliation for prolonged periods of time. Radiation therapy is very useful in managing local problems in generalized disease. In addition, the patient may still benefit from radiation therapy when his tumor has become resistant to the available antineoplastic agents.

In choosing an antineoplastic drug for treatment of the lymphomas, one must consider the patient's clinical condition, the chances of a beneficial response, and the toxicities of the various drugs. Table 1 lists the major effective agents and the response rates that have been reported for them in several studies.[1, 2, 4-8]

TABLE 1

PERCENTAGES OF PATIENTS WITH OBJECTIVE RESPONSES* TO VARIOUS ANTINEOPLASTIC AGENTS

Agent	Hodgkin's	Lymphosarcoma	Reticulum Cell Sarcoma
Alkylating Agents ..	50-80%	70%	50%
Vincristine	—	45	40
Vinblastine	75	—	—
Ibenzmethazin	75	—	—
Prednisone	50	65	50

* Decrease of at least 50% in tumor size.

ALKYLATING AGENTS

Probably the most widely used alkylating agents for the treatment of lymphomas are mechlorethamine (nitrogen mustard), cyclophosphamide (Cytoxan) and chlorambucil (Leukeran). An alkylating agent is a reactive drug which can add alkyl or straight carbon chains to most of the reactive groups within the cell. In the reaction, a hydrogen atom is replaced by an alkyl radical. The major toxic effect of the alkylating agents is bone-marrow depression.

The choice of an alklating agent is dictated largely by the physician's preference and by his assessment of the patient's clinical condition. Patients with superior-vena-caval obstruction or spinal-cord compression from extradural tumor will benefit from the more rapidly acting nitrogen mustard in addition to radiation therapy. Patients on whom blood counts cannot be obtained weekly can be treated with nitrogen mustard. Cyclophosphamide is useful for those who will remain available for those frequent checks. It can be given orally or intravenously on an outpatient basis, and the dosage can be adjusted weekly according to the successive blood counts. Cyclophosphamide seems less destructive of platelets, compared with the other alkylating agents, but it may produce temporary alopecia and hemorrhagic cystitis.

VINCA ALKALOIDS

The vinca alkaloids vincristine and vinblastine produce metaphase arrest both in cell cultures and *in vivo*. Their therapeutic activity may be related to that antimitotic effect, but the possibility remains that the anti-tumor effect may be mediated by some other reaction within the cell. Vincristine and vinblastine are structurally similar, differing only in that a formyl is substituted for a methyl group.

Despite the small structural difference, however, there are considerable differences between them in antitumor action and toxicity. Compared with vinblastine, vincristine is effective in much smaller doses and is more active in acute leukemia. Moreover, in therapeutically effective doses it produces relatively more neurotoxicity and less marrow depression. Vincristine may be more active than vinblastine in lymphosarcoma and reticulum cell sarcoma, but it is less active in Hodgkin's disease. Vinblastine does have activity in lymphosarcoma and reticulum cell sarcoma, and vincristine is active in Hodgkin's disease. The patient with Hodgkin's disease who presents with a low white blood cell or platelet count may benefit more from treatment with vincristine, however, since less marrow depression is likely to occur.

The neurotoxicity of the vinca alkaloids may be dose-limiting. Myopathy may also be seen. Generally, one plans a six-week course with these agents. Thereafter, if maintenance therapy with a vinca alkaloid is desired, the patient must be watched closely for neurotoxicity. Alternatively, the patient can be maintained with an alkylating agent, provided the tumor is still responsive to alkylating agents. If maintenance with an alkylating agent is undertaken and there is a recurrence of the disease, one can start a repeat course of the

vinca alkaloid, again adjusting the dose in accordance with blood counts and neurotoxicity.

CORTICOSTEROIDS

The response rate to corticosteroids appears to be about 50 per cent. It is obtained with a dosage of 100 to 200 mg. of prednisone daily. Doses of about 30 mg./day are useful for the hemolytic anemia which may occur in patients with lymphoma, but generally it will not produce an objective regression in node size. A dose of 20 to 30 mg. of prednisone may also be helpful in controlling pleural effusions secondary to lymphoma. Except for the patients with hemolytic anemia or pleural effusion, prednisone is generally reserved for the patient with disease that is resistant to the other useful drugs, or for the patient with a sufficient depression of white-cell count or platelets to preclude the use of the other drugs.

OTHER USEFUL ANTINEOPLASTIC DRUGS

The most promising investigational drug at present is the methyl hydrazine derivative ibenzmethazin (procarbazine, Natulan). Responses have also been seen with methotrexate, streptonigrin, 1, 3 bis (2-chlorethyl) 1-nitrosourea (BCNU), methylglyoxal-bis-guanylhydrazone, cystosine arabinoside, and actinomycin D. Therapy with combinations of three or four of the most effective agents is being studied, at present, in several centers. High rates of response are obtained, and the duration of remission is more prolonged with this approach. At present it is not known whether a combination of effective agents will give better palliation than the judicious use of the same agents sequentially.

REMISSION-INDUCTION AND MAINTENANCE THERAPY

Patients in whom therapy produces a 50 per cent or more shrinkage of palpable tumor are said to have an objective response or remission. The median duration of remissions in the lymphoma patient treated with a single course of one drug is about six weeks. It is obvious, therefore, that additional therapy will be needed. After the initial course of therapy, the patient may be given a maintenance dose of either cyclophosphamide or chlorambucil, provided his tumor is still sensitive to alkylating agents, or he can be left unmaintained and can be given repeat courses of chemotherapy when a progression of the lymphoma becomes evident. The median duration of remission for patients maintained with an oral alkylating agent is about 38 weeks for Hodgkin's disease; 33 weeks for lymphosarcoma; and 20 weeks for reticulum cell sarcoma.[6, 7] Whether the patient is given continuous maintenance therapy or intermittent retreatment when he relapses, there is little difference in the total effectiveness of the drug. The choice between maintenance and intermittent therapy, therefore, depends somewhat on the availability of the patient for follow-up care. Long-term survival figures for these two regimens are not yet available.

Once treatment has been started with a particular drug, it should be given an adequate trial. This means, generally, that the patient should be observed for at least four to six weeks to see whether he benefits from the drug. During that time some estimate must be made as to whether the treatment is successful. The simplest way of deciding is to observe a tumor that can be measured. It may be a tumor in a lymph node, a palpable subcutaneous tumor, or a tumor visible on roentgenograms such as a lung lesion. If measurable disease is present, measurements should be taken before treatment starts, and then at intervals as treatment progresses. One of the best methods includes measurements in two directions. A 50 per cent or greater decrease in tumor size can be called an objective response. Simple observations such as that the patient feels better or that perhaps the drug has slowed the tumor's rate of growth are inadequate gauges of successful therapy.

If a course of chemotherapy has been given, should it be repeated when the tumor recurs? The answer depends upon the response. For example, if nitrogen mustard is given and the tumor fails to decrease in size or even shows progression, then it is futile to repeat nitrogen mustard. This finding is an indication for the use of a different drug. In general (although this is not always true), if the tumor is resistant to one alkylating agent, it probably will be resistant to other alkylating agents, and a

different type of antineoplastic agent should be employed.

If there has been an objective response to a drug, then it is reasonable to give it for maintenance therapy (especially true of alkylating agents), or to give repeat courses of the drug (an alkylating agent or one of the vinca alkaloids). The same drug should be used until progression of the tumor is noted while the patient is still on the drug. When progression occurs, a different agent is given, and the same clinical evaluations are made.

DRUG DOSAGE AND FOLLOW-UP

In addition to evaluating the therapeutic effect of the drug, the signs and symptoms of drug toxicity must be carefully followed. Bone-marrow depression, in particular, will be dose-limiting. It is often necessary to modify drug dosage, since practically all antineoplastic agents are effective only at levels at which there is toxicity. Because of the toxicity of these agents, it is important to stop a drug when it becomes no longer effective. A number of agents may be given orally, or may be given intravenously at weekly intervals. This is particularly true of cyclophosphamide and the vinca alkaloids. If blood counts are obtained at weekly intervals, necessary adjustments in drug dosage can be made.

Table 2 presents dosage schedules that may be used for cyclophosphamide and the vinca alkaloids, a widely used scheme for adjusting drug dosage to avoid severe marrow toxicity, and a summary of the major points in patient follow-up.

SUMMARY

Radiation therapy is potentially curative in localized and regional Hodgkin's disease. In more advanced lymphomatous disease, the judicious use of radiation therapy and chemotherapy permits significant palliation. A number of antineoplastic agents are useful in these diseases. Carefully planned therapy, precise evaluation of response, and careful adjustment of dosage to avoid serious toxic effects will give the patient maximal benefit.

TABLE 2

ANTINEOPLASTIC-AGENT DOSAGE, DOSAGE ADJUSTMENT, AND FOLLOW-UP

Calculation of Base Dosage

1. Cyclophosphamide (Cytoxan)
 a. oral—2.5 mg./Kg./day
 b. intravenous—15 mg./Kg./week (1,000 mg./wk. maximum dose)
2. Vincristine (Oncovin)—0.025 mg./Kg./wk., intravenously
3. Vinblastine (Velban)—0.1 mg./Kg./wk., intravenously. Increase dosage weekly by increments of 0.05 mg./Kg. to toxicity.

Dosage Adjustment for Marrow Depression

WBC/cu. mm.	Platelets/cu. mm.	Per cent of Initial Daily Dose
>5,000	>100,000	100
4,000-5,000	75,000-100,000	75
3,000-4,000	—	50
2,000-3,000	50,000- 75,000	25
<2,000	< 50,000	0

Patient Follow-Up

1. Obtain hematocrit and white blood cell and platelet counts at weekly intervals, and adjust dosage according to the above outline each week. Other toxic manifestations may also necessitate changes in drug dosage.
2. If the initial white blood cell or platelet count is low, start chemotherapy at the indicated percentage of the base dose.
3. An adequate trial of therapy is four to six weeks. If there is a response (>50 per cent shrinkage), consider maintenance therapy. If there is no response, a change in therapy is indicated.
4. Measure and record the size of the palpable tumor at weekly intervals.

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University of Iowa
College of Medicine

Clinical Pathologic Conference No. 501

Hematemesis, Diarrhea, Colitis, Cryptitis

RAYMOND F. SHEETS, M.D., Chairman,
CPC Committee
MRS. DONNA KENNEDY, Secretary

SUMMARY OF CLINICAL FINDINGS

A Caucasian farmer first developed abdominal symptoms at the age of 30. He had severe, recurrent pain in the upper abdomen associated with nausea and vomiting. After several weeks he consulted his family physician. X-rays showed a duodenal ulcer. A diet, antacids and anticholinergics produced only partial relief. The symptoms continued intermittently for two years.

Then he developed diarrhea. Beginning gradually, the diarrhea increased to the point where he was having seven or eight brown or green mucous stools daily. The diarrhea was accompanied by intermittent, lower-abdominal, colicky, cramping pain, relieved by bowel movements. He had frequent bowel movements during the night. His family physician treated him with sulfasuxidine, and it produced some reduction in the number of stools but did not completely relieve his symptoms. He lost about 20 lbs. of weight.

Those symptoms brought him to the University of Iowa Medical Center for the first time in 1965. One brother and two sisters had ulcer trouble. One sister had chronic diarrhea. On physical examination during the patient's first visit here, he was found to be a chronically ill-appearing man weighing 108 lbs. Positive physical findings were limited to the abdomen, where tenderness was detected in the epigastrium and in both lower quadrants. A chest x-ray was normal. A barium enema suggested some raggedness of the mucosa, but it was interpreted as normal. Sigmoidoscopy showed abundant blood, with increased friability and granularity of the mucosa. The laboratory examination showed a hemoglobin of 10 Gm. per cent, a white blood cell count of 17,300/cu. mm., a sedimentation rate of 72 mm./hr. by the Westergren method, a serum albumin of 3.3 and a serum globulin of 3.7 Gm. per cent. Other liver function tests were normal except for a serum alkaline phosphatase of 2.8 units.

The patient was treated with Azulfidine. He returned to the hospital repeatedly over the next several months, and during that time he showed little improvement as a result of treatment. The hemoglobin varied from 8.0 to 9.5 Gm. per cent, and the white blood cell count was consistently between 14,000 and 24,000/cu. mm. The stool was always bloody. Repeated stool cultures yielded hemolytic Staphylococcus aureus. Repeated x-rays, including an upper-gastrointestinal series and a motor meal, were read as normal, but repeated examinations of the colon showed some ulceration in the transverse portion. He developed anorexia, increased upper-abdominal pain and a rash in the mouth after taking Azulfidine. Sulfaxidine was substituted for Azulfadine, and the patient was given oxacillin for a brief period. Repeated sigmoidoscopies showed an increasingly bloody, friable and edematous rectal mucosa, with anal fissures. He showed some brief improvement on prednisone. He later received

Diodoquin, despite a negative stool examination for parasites.

After eight months of such treatment, he was unimproved. He continued to have episodes of severe epigastric pain, anorexia, nausea, 15 or more bloody stools daily and intermittent fever. Repeated x-rays showed a normal esophagus, stomach and duodenum. A repeted barium enema showed gross ulcerations and pseudopolyps throughout the entire colon. The terminal ileum filled and also appeared abnormal. The rectum was spared, in contrast with the rest of the colon. The retrorectal space was not thickened, though there was shortening of the entire colon.

In November, 1965, a total abdominal colectomy was performed, and the pathologic examination of the excised colon showed chronic ulcerative colitis. The rectosigmoid colon was left behind, to be removed later. The patient's postoperative course was uneventful, and he was discharged with an ileostomy. He returned eight months after his surgery, complaining of bloody discharge from the rectum. Digital examination revealed a 2 x 2 cm. tender mass one inch above the anal verge on the anterior wall. It proved to be an abscess which drained spontaneously. X-ray examination of the residual colon showed no abnormalities except an increased distance between the sacral promontory and the sigmoid colon. Blood counts, urinalyses and liver-function tests were all normal. The serum albumin was 3.6 and the globulin 3.7 Gm. per cent. Abdomino-perineal resection of the remaining colon was recommended, but the patient refused it.

He continued to have rectal bleeding, and his anemia recurred. Later, a mass in the rectum was biopsied and was said to show inflammation and a crypt abscess. He continued to have upper-abdominal pain and nausea. A repeat upper-gastrointestinal series showed dilatation of the second portion of the duodenal loop and flattening of the mucosa.

In June, 1967, the hemoglobin was 7.9 Gm., and he was given ferrous sulfate. He returned in September, 1967, and was found to have a hemogloblin of 5 Gm. and a hematocrit of 17 per cent. The serum iron was 11 micrograms per cent. A bone marrow showed a mild increase in the erythroid series and hypochromia of the red cells. Repeat sigmoidoscopies showed friable, bleeding, ulcerated mucosa, with a crypt abscess. The patient refused admission to the hospital, but was persuaded to stay 24 hrs. for blood transfusions. He was instructed to use hydrocortisone hemisuccinate enemas. He was also given prednisone orally. On subsequent visits he continued complaining of epigastric pain and increasing difficulties with solid food, but said his pain was usually relieved by antacids. On his last admission he complained of hematemesis and an inability to tolerate any solid food, though his rectal bleeding was markedly diminished. A second episode of massive hematemesis in the hospital prompted an operation.

CLINICAL DISCUSSION

Dr. J. C. Brown, Internal Medicine: Mr. Stewart will discuss the case for the students.

Mr. S. M. Stewart, junior ward clerk: The chief differential diagnosis in this case involved distinguishing between chronic ulcerative colitis and regional enteritis. We are convinced that the primary diagnosis should be chronic ulcerative colitis, and that the patient's duodenal ulcer at the age of 30 years was independent of his later colonic disease. We think his last admission due to hematemesis was prompted by the development of a gastric or duodenal ulcer secondary to prednisone, or by the recurrence of his primary ulcer.

We picked chronic ulcerative colitis as the primary diagnosis because of the composite picture of clinical, roentgenologic and pathologic findings. The clinical characteristics important to our conclusion were as follows: (1) Assuming that the duodenal ulcer was an independent disease, we think the initial signs and symptoms of his lower-intestine difficulty were colonic, consisting of low-abdominal cramping pain relieved by bowel movements, and tenderness in the epigastrium and in both lower quadrants. (2) There were bloody stools —consistently and persistently bloody stools. (3) The sigmoidoscopic findings of friable and granular mucosa were reported without any mention of localization or of any normal mucosa in between. Later, rectal mucosa which had become increasingly friable and edematous suggested that the rectum had been involved from the start.

The roentgenologic findings important to our conclusion were the barium enema which showed raggedness but no indication of localization. The skipping pattern of regional enteritis was not found. The normal upper-gastrointestinal motor meal suggested that the disease was primarily colonic. Also, there were no indications of fistulas, adhesions or symptoms suggestive of regional enteritis. A repeat barium enema showed that the entire—and this is important—that the entire colon was grossly ulcerated and contained pseudopolyps. Pseudopolyps are characteristic of chronic ulcerative colitis. When the total colectomy was done in 1965, the pathologist's report was chronic ulcerative colitis. A rectal biopsy taken when the abscess developed, late in the patient's history, failed to show granulomatous lesions suggestive of regional enteritis. It is important to realize not only that no single clinical or laboratory finding is pathognomonic, but also that no finding can either rule in or rule out chronic ulcerative colitis or regional enteritis, and that the diagnosis must be based upon a composite of all these factors. The gastrointestinal series, the sigmoidoscopic findings and the examination of the tissues, grossly and microscopically, have provided the most reliable information, and the clinical signs and symptoms have proved to be the least reliable. Our differential diagnosis also included carcinoma of the colon. The specific dysenteries and tuberculosis of the colon, along with other less-common conditions, were also considered.

Dr. Brown: Thank you, Mr. Stewart. If there are no questions to be addressed to Mr. Stewart, I am going to break with tradition and turn the rest of the program over to Dr. Christensen, of the Department of Medicine.

Dr. James Christensen, Internal Medicine: As the discussant, I am in the enviable position of having taken care of the patient and having written the clinical summary which you received when you entered the room. On the basis of the protocol, I should have to agree with Mr. Stewart that the likely diagnoses were chronic ulcerative colitis and duodenal ulcer. The protocol provides no more than a few hints to the contrary. One of the patient's sisters is said to have had chronic diarrhea. That revelation might have tipped you off to



Figure 1. There is a diffuse ulcerative pattern in the colon, and a "cobblestone" appearance in the distal ileum. The latter is characteristic of Crohn's disease.

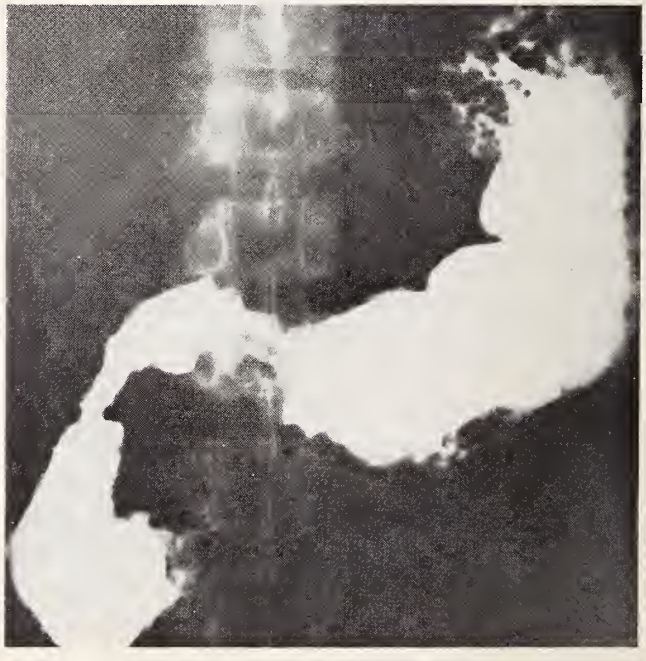


Figure 2. A mild deformity of the duodenal bulb and a narrowed descending duodenum were evident on the second upper-gastrointestinal examination.

the possibility that this man had something other than ulcerative colitis, for Crohn's disease tends to be more familial than ulcerative colitis. There have been several families in which Crohn's disease seems to have occurred with considerable frequency.

That is a rather minor point. The other, somewhat more important hint that might lead you to think that this man had Crohn's disease rather than ulcerative colitis is his failure to improve at all after drug therapy or after his colectomy. Many patients with chronic ulcerative colitis do improve, at least transiently, on drug treatment, and most ulcerative colitis patients show a great deal of improvement following removal of the diseased colon. This man, however, did not improve at all. I saw him for about a year before he had his colectomy, and I saw him again from six to eight months after his colectomy. He looked just as bad afterward as he had before. We continued to treat him as if he had ulcerative colitis until September, 1967. The correct diagnosis, Crohn's disease, became apparent in consequence of some help we had at that time in reviewing his x-rays and in reviewing his pathology. I shall have Dr. Cohen show us some of the x-ray films in this case, and discuss the radiologic differential diagnosis between ulcerative colitis and Crohn's disease.

Dr. W. N. Cohen, Radiology: On the initial examination of the colon, a slight "frayed" appearance was evident at the mucosal surface. That, in itself, was consistent with early ulcerative colitis. The distal ileum, however, was not visualized at that time. The second examination (Figure 1), eight months later, showed definite progression of the disease, with a diffusely irregular marginal contour of the colon. The distal ileum was visualized at that time, and it had a definite cobblestone surface pattern which is characteristic of Crohn's disease. The "backwash" ileitis which may be associated with ulcerative colitis does not have that appearance. The colonic disease in itself would not be sufficiently specific to serve as the basis for a differentiation between ulcerative colitis and Crohn's disease.

Although the original upper-gastrointestinal examination was interpreted as normal, I believe in retrospect that it showed a slight abnormality of the descending portion of the duodenum. Subsequently, a definite deformity of the duodenal bulb and a narrowing of the descending portion became manifest (Figure 2). On the most recent examination, the narrowed segment had a definite strictured appearance, and multiple gastric ulcerations had developed (Figures 3, A and B).

This patient, therefore, had disease in the colon, in the distal ileum, and in the duodenum and stomach, the morphology of which is com-

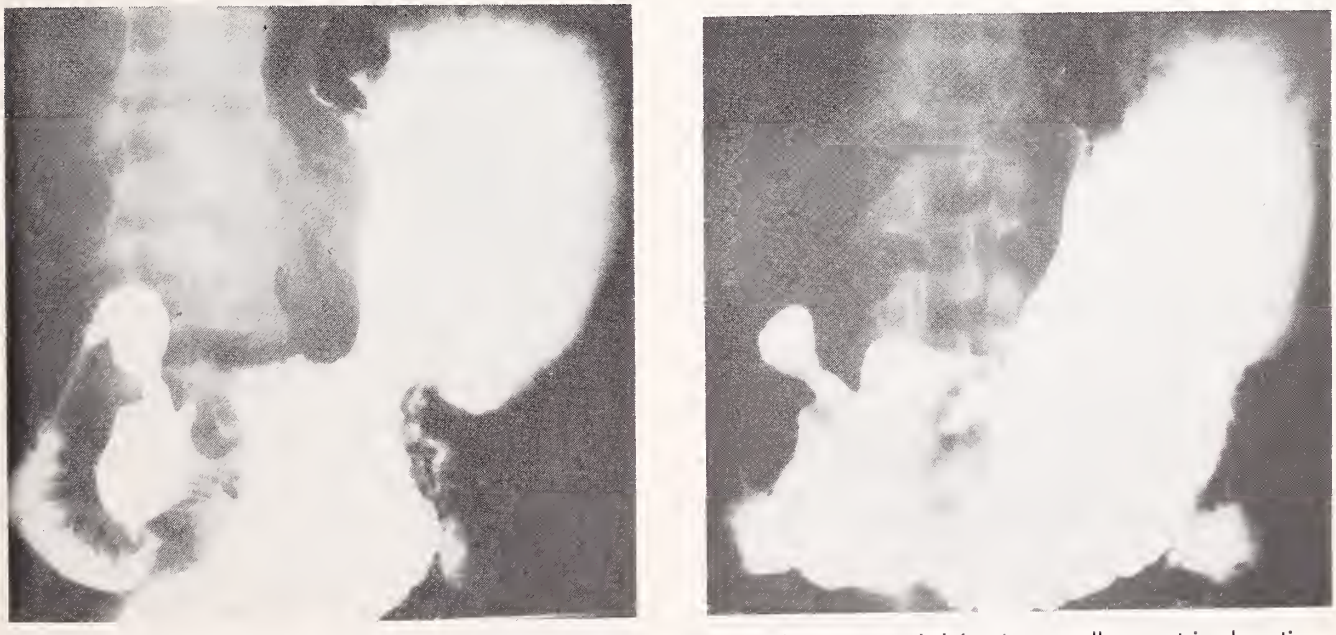


Figure 3 (A&B). The most recent examination demonstrated duodenal stricture and deformity as well as gastric ulcerations, particularly about the antrum and lesser curvature.

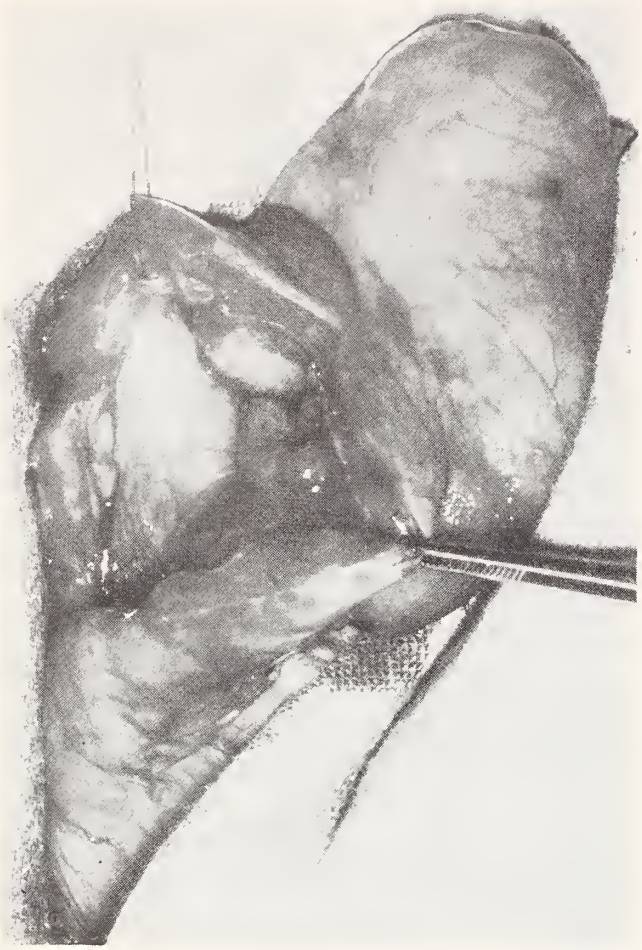


Figure 4. Upon opening the stomach, we found an ulceration of the distal stomach and proximal duodenum. What is shown here is a duodeno-gastrotomy. The entire light-colored area is ulcer base. There was bleeding from the edge of the ulcer.

patible with Crohn's disease. Although that disease usually is limited to the distal ileum, there have been frequent instances of colonic involvement in recent years. Duodenal and gastric disease has been reported sporadically, and although the latter is considered most unusual, we have seen several examples of it at our hospital. The radiographic appearance is not specific in the stomach and duodenum, but suspicion is justified when there is more characteristic distal disease, particularly in the terminal ileum.

Dr. Christensen: You have noted that the protocol ended with a report that the patient underwent "an operation." It was a gastrectomy. He subsequently had a second one—another subtotal gastrectomy—and Dr. Porter, who did both of them, is here to show us some pictures and to tell us what he found.

Dr. Samuel D. Porter, Surgery: On January 19 the patient underwent a hemigastrectomy, a liver biopsy, a feeding jejunostomy and a

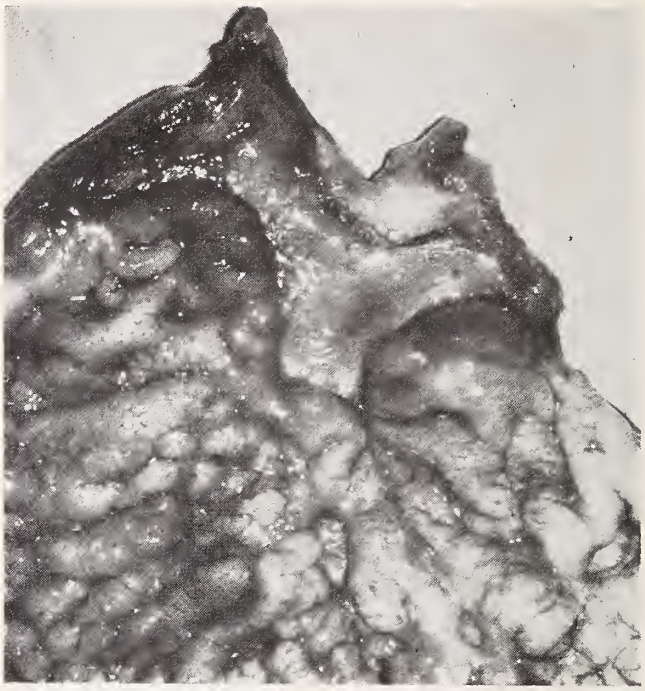


Figure 5. The distal end of the surgical specimen, with antrum and pyloric area and proximal duodenum all a confluent ulcer, very nearly circumferential in the pyloric channel.

duodenostomy. Upon opening the stomach (Figure 4), we found an ulceration of the distal stomach and proximal duodenum. What is shown here is a duodeno-gastrotomy. The entire light-colored area here is ulcer base. There was bleeding from the edge of the ulcer. The ulcer involved much of the distal stomach, and as far down into the duodenum as we could see. Figure 5 shows the distal end of the surgical specimen, with antrum and pyloric area and proximal duodenum all a confluent ulcer. The ulcer was nearly circumferential in the pyloric channel. There were some punched-out, fairly deep gastric ulcers in the distal stomach.

A Billroth II anastomosis was made because the duodenal stump looked very bad. Palpation indicated that it was ulcerated down to the region of the ampulla of Vater. We chose to put in a duodenostomy of the end type for decompression. Because of the patient's very precarious nutritional status secondary to his chronic intestinal disease, I resected no more than half of the stomach, for I did not want to add the additional nutritional liability of a higher gastrectomy, and I hoped we could get by with that lesser procedure. In retrospect, I wish we had done a vagectomy at that time.

His immediate postoperative course was uncomplicated. The last of the tubes was removed on January 29, and he was discharged on Feb-

ruary 4, just 15 days postoperatively, on 5 mg. of prednisone daily and a high-protein diet. He was tolerating the diet and medication well when he left the hospital, and he was gradually increasing his activity.

On the morning of February 10, he returned with severe upper-gastrointestinal hemorrhage. On admission his blood pressure was unobtainable, and he had a very weak, thready, rapid pulse. He was unresponsive, cold, clammy and in deep shock. With the idea of gaining a little time, we immediately put in a gastric cooling balloon and began replacement transfusion. Because the balloon was in the stomach and we were unable to irrigate the clots adequately, a selective iliac and mesenteric arteriogram was done, rather than barium studies. The angiogram showed the possibility of diffuse bleeding. It seemed as if there might be some bleeding from the ileum and from the duodenal stump. For that reason, and because he was stable, we elected to withhold surgery a bit longer. He did respond to blood transfusions, and his bleeding slowed, but it did not completely stop, and we therefore operated upon him during the evening of the day of his readmission.

At that time a marginal ulcer in the jejunum just distal to the gastroenterostomy, and some superficial ulcers in the stomach were found. Clots were distending his afferent loop. When those clots had been removed, it appeared that there was active bleeding from the duodenal stump. I thought the marginal ulcer probably was the cause of his bleeding, but I didn't think we could afford to miss a bleeding site. We opened the duodenum longitudinally and extracted the clots. There was no active bleeding site in the duodenum, but the entire duodenum showed severe, acute and chronic duodenitis, with ulceration. The duodenum was then closed over a duodenostomy tube and the marginal ulcer. A segment of the jejunum and most of the rest of the stomach were removed. The small gastric pouch was left, and an entero-enterostomy was carried out above the ligament of Treitz, with a new gastroenterostomy set up just beyond the entero-enterostomy.

Again we didn't do a vagectomy because we had removed almost all of the patient's stomach, because of the effects of vagectomy on the pancreas and the biliary tract, and because of the severe nutritional difficulties that were likely to follow. A feeding jejunostomy and retrograde gastrostomy was placed. When the duodenostomy was performed, the duodenum was biopsied through what looked like stenosed duodenum on the x-ray. I felt at that time that if granulomata were present in the duodenum, we could get them with that biopsy.

At the conclusion of that procedure his condition was very poor, and postoperatively he was given hydrocortisone, 20 mg. q8 hrs., AquaMephyton and ampicillin. The low dose of hydrocortisone may require some explanation, for it is considerably less than we usually give to patients in whom replacement is thought necessary postoperatively. In most cases, I think, we give much more than the patient needs, though it usually doesn't make much difference. In this instance—in a patient who was susceptible to many complications—we felt that we would have to recognize any difficulty at the earliest possible time if we hoped to save the man's life, and we thought that the minimum dose of steroid would be least likely to mask the clinical signs of a complication.

On February 13, three days postoperatively, he became grossly jaundiced. Also on that third postoperative day a fistula appeared in the wound. He was given some blood at that time, and during the next two days two more fistulae appeared in the wound. It was then evident that we were being called upon to deal with a high-grade upper-gastrointestinal fistula.

On February 18 he became acidotic, and we began refeeding his suction aspirate from the fistulae through his jejunostomy. He was placed on blended formula at that time.

On February 23—13 days postoperatively—he became Addisonian, showed a rise in potassium and a decrease in sodium, and had a blood pressure of 90/60 mm. Hg. It became necessary to administer sodium and to increase his steroids. He was moribund for eight to 12 hours at that time. On February 24 we began DOCA,* and administered calcium gluconate and magnesium sulfate. It was at that time we found that his jejunostomy feedings were not being absorbed, and were coming out of his ileostomy having essentially the same physical appearance that they had when they went into the jejunostomy, above. We felt that this finding represented an exacerbation of his regional enteritis involving essentially all of his small bowel, and that he was not absorbing anything.

* Desoxycorticosterone.

His weight decreased, and he showed no evidence of wound-healing. With the DOCA, increased fluid and increased steroids, his urinary output picked up, and he improved. On two occasions after the initial Addisonian crisis we attempted to lower his hydrocortisone dosage below 200 mg/day, and each time he had similar episodes of non-absorption and hypotension. Subsequently his steroids have been gradually reduced. His weight has stabilized at 88 lbs. Six tubes have been used for fistula-aspiration, at one time or another, and we refed the aspirate. Now all but one have been removed.

This morning the fistula had stopped draining, and we were getting nothing back from the tube. He is showing no evidence of any intraabdominal accumulation, and he has had no fever. I don't want to be overly optimistic, but it seems we may finally have things under control.

Fluoroscopy with a Gastrografin swallow revealed that the main leak was at the entero-enterostomy that had been created when the original gastroenterostomy was resected. Neither the gastroenterostomy nor the duodenostomy leaked.

Until today, we have been refeeding two-thirds of the patient's fistula drainage, as well as blended formula. He is on hydrocortisone, 25 mg. b.i.d., calcium gluconate, calcium carbonate and potassium gluconate. He occasionally tends toward acidosis, but that is fairly easily corrected. We have been able to catch it early by following his weight, urinary pH and Fantus. His wound is healing very slowly, though the granulation tissue is looking healthier. His general condition is improving slowly. If this man is salvaged, I think the credit will belong to the junior residents on the ward and to the splendid nursing care that he has received.

Dr. Christensen: After his colectomy and before his first gastrectomy last fall, we had occasion to review the pathology of the resected colonic segment. Dr. Kent will discuss with us the pathology of that specimen, and also of the portion of the stomach resected at the time of the first operation.

Dr. T. H. Kent, Pathology: Usually in these CPC's the pathologist gets the last laugh, but today the clinicians have their turn. No one

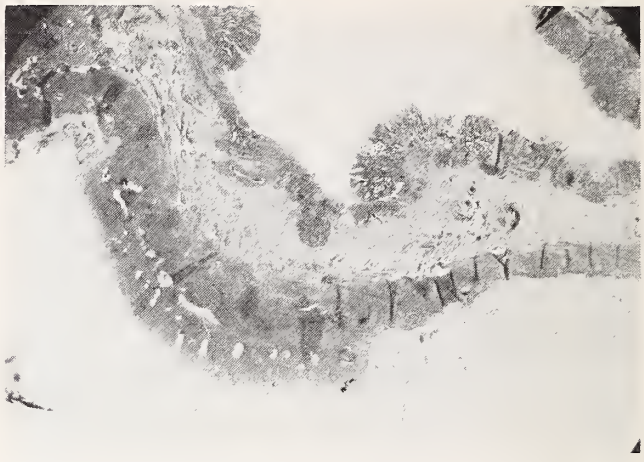


Figure 6. Histologically, the ulcers were chronic, with a dense fibrous base and lymphocytic infiltrate. The mucosa was nearly normal in the areas adjacent to the ulcers, but dense scarring was found in the submucosa, and focal infiltrate in the wall.

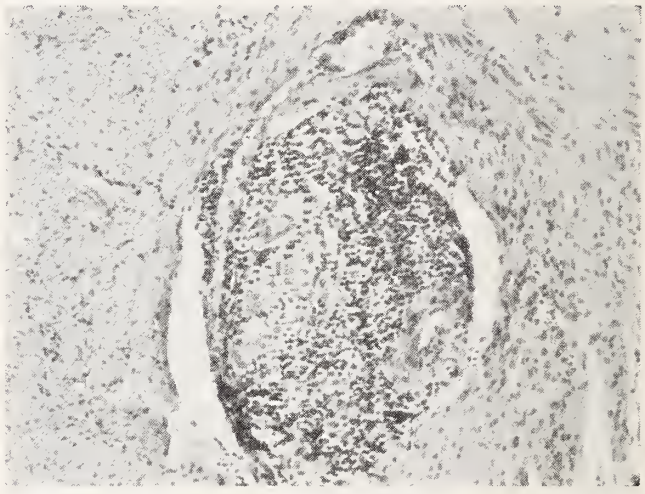


Figure 7. A higher-power view of the wall infiltrate.

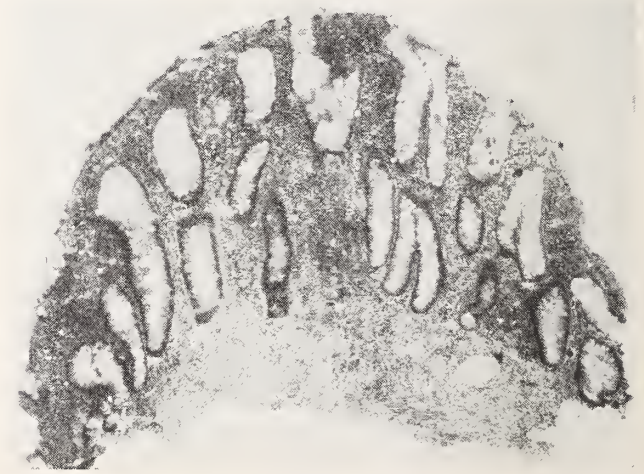


Figure 8. A rectal biopsy showed a chronic and probably nonspecific inflammation of the rectal mucosa.

informed me that the patient had an additional operation after his gastrectomy, and consequently I have no information on whether that specimen exhibited any evidence of regional enteritis. The first specimen we received was a 68 cm. piece of colon that was said to have extensive longitudinal ulcerations. Features suggestive of regional enteritis such as skip areas, cobblestone mucosa, fistulae and a thickened wall were not described by the prosector. The appendix was present, but we do not know whether it was normal or abnormal, and no description of the terminal ileum was given, though I assume it was there since the appendix was present.

Histologically (Figure 6), the ulcers were chronic, with a dense fibrous base and lymphocytic infiltrate. The mucosa was nearly normal in the areas adjacent to the ulcers, but the prosector found dense scarring in the submucosa and foci infiltrate in the wall. The next slide is a high-power view of the wall infiltrate (Figure 7). It had the appearance one usually sees in the wall of the colon in regional enteritis, with foci containing mixtures of lymphocytes, histiocytes, and occasional giant cells, usually of Langhan's type. So in retrospect we might say that the evidence of full-wall involvement in the few slides that we have suggests that the entity was regional enteritis. But the lack of really extensive wall involvement and of a clear description of the gross specimen makes the diagnosis somewhat equivocal.

The rectal biopsy which was done later (Figure 8) showed a chronic inflammation of the rectal mucosa which I think was nonspecific. It can be seen either in regional enteritis or in ulcerative colitis, and in general I feel that rectal biopsies, except perhaps in the very early stage of ulcerative colitis, are not particularly helpful in distinguishing between these two conditions. The granulomatous reaction, when it occurs, usually is not seen in the mucosa. Four peroral biopsies of the stomach were done in an attempt to sample the ulcerated area and see whether there was any evidence of regional enteritis, but all four biopsies were normal.

There was a large ulcer at the duodenogastric junction. Actually, I didn't see any duodenal mucosa, but I assume that the margin was right at the duodenum. There were smaller ulcers in the antrum and along the lesser curvature. Figure 9 is a section of the edge of that very large ulcer. One sees the overhanging mucosa and the ulcer base. It exhibits the histology of a typical peptic ulcer, without evidence of the full wall involvement or granulomatous component which would suggest regional enteritis. Figure 10 is a section of the biopsy site where the peroral biopsy was done. The mucosa contained normal glands with parietal cells, but in the center there was a defect which was filled with mucous-type glands. Eventually that would regenerate and be indistinguishable from normal.

The evidence we have regarding the colon, I think probably fits better into the category of regional enteritis of the colon. I should certainly like to know what was going on in the patient's ileum. I haven't seen any pathologic data or any follow-up data on whether he still

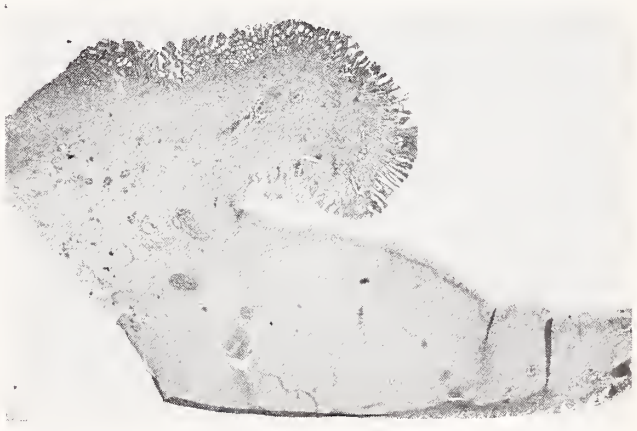


Figure 9. A section of the edge of the large ulcer at the duodeno-gastric junction, showing the overhanging ulcer and the ulcer base.

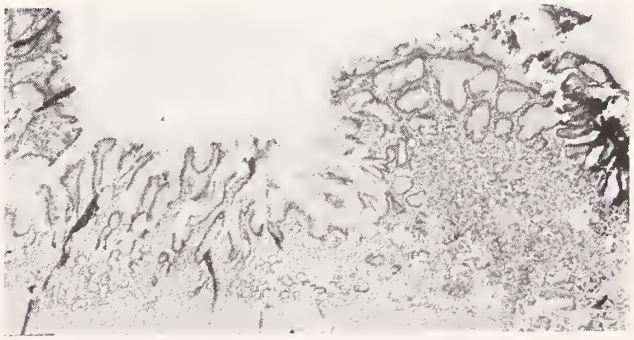


Figure 10. A section of the site of the peroral biopsy. The mucosa contained normal glands with parietal cells, but in the center was a defect filled with mucous-type glands.

has ileal disease compatible with regional enteritis. The ulcers in the stomach, as far as I can tell without examining the second specimen, are just peptic ulcers, and not the ulcerated areas of regional enteritis.

I should like to talk a little bit about the differentiation of regional enteritis and ulcerative colitis in the colon. There has been a revived interest in the classification of ulcerative disease in the colon during the past few years, and the current ideas are quite different from the concepts that we held earlier. We are making different diagnoses, and the new way of doing things discredits some of the old statistics. The ultimate differentiation between these two diseases, of course, rests on finding the causative factor. Unless we can show the cause, we shall never be able to differentiate them absolutely. I think that the gross and microscopic features are sufficiently distinctive, however, and a number of people recently have agreed that we can classify them more satisfactorily on that basis.

But why should we try to differentiate them? First, if we can categorize them accurately, we may be able to get a better clue as to their causes. Second, there may be different complications, but this aspect as yet is not very well defined. For the present, at least, I think it should be reevaluated. In regional enteritis, however, there is a distinct frequency of perianal disease, particularly fistulae. Fistulae in other parts of the bowel are also frequent. An ileal lesion is likely to develop, or might develop, after resection of the colon for regional enteritis, but it will not develop after ulcerative colitis. Third, it may be that we do not need to resect all of the colon in regional enteritis, particularly if there is an area that is not involved. We have a number of cases in which total colectomy was methodically carried out because of the threat of carcinoma. There may be no such danger in regional enteritis, and we may not need to resect it all. Fourth is the point that I made earlier—that our current pathologic evidence seems to indicate that we can separate these entities much more accurately than we have in the past.

Also I should like to comment briefly on the nomenclature of these diseases. I prefer the term "regional enteritis" accompanied by a designation of a site—e.g., "regional enteritis of the colon," "regional enteritis of the ileum," or "regional enteritis of the stomach." An alternate term, "Crohn's disease of the ileum or colon," is perfectly acceptable. Many people have been using the name "granulomatous colitis," but it is very misleading in that many of the cases which fit regional enteritis perfectly do not have a granulomatous component, and thus everybody becomes confused.

Ulcerative colitis has two features that are rather distinctive. First, it is primarily a disease of the mucosa. The mucosa between the ulcers is involved. In other words, one has ulceration of a damaged mucosa. In the active stage, crypt abscesses are the prominent feature. In the more inactive stage, a dense chronic inflammation of the mucosa is the prominent feature. The muscularis mucosa is usually thick, and often there is a dense lymphoid infiltrate in the upper submucosa, though the lower part of the submucosa is generally normal. Second, ulcerative colitis affects the rectum first and most severely, and the disease progresses upward. Rarely are there any skip involvements. The involvement is continuous and it tends to shade off at the upper margin. Contrastingly, there may be a sharp demarkation in regional enteritis. The ileum may be involved in ulcerative colitis, but only in cases that involve the entire colon and display contiguous involvement with the cecum.

Now what are the features of regional enteritis? There are two distinctive manifestations. First and most importantly, the inflammation involves the entire wall. Lymphoid infiltrate, particularly a perivascular one, is often a most prominent feature. The mucosa between the ulcerated areas tends to be more nearly normal than in ulcerative colitis. Granulomas are present in about 60 per cent of the cases, but in the remaining 40 per cent, though there are identical other features, one cannot find granulomas. Granulomas tend to occur in the center of lymphoid aggregates. Fistulae are another common manifestation of the full-wall involvement. The deep burrowing into the wall results in fistulae. The ulcers tend to be linear, and often they are slit-like. These slit-like ulcers, with undermining, create the cobblestone appearance. The cobblestones are normal mucosa bent over the ulcerated areas.

The second feature that is really distinctive

for regional enteritis is its segmental involvement. It is often present as skip areas. But I think skip areas are just the most dramatic form of segmental involvement. The prerequisites for a skip area are an abnormal area, a normal area and an abnormal area. Thus I think one can have segmental involvement without distinctive skip areas. There can be patchy areas, with patches of normal mucosa between the abnormal ones, or they can be sharply segmental without a true skip. Another manifestation of segmentation is the variable distribution. It may be in the ileum. It may be in the ileum and the colon. The rectum usually is not involved, although it may be. In the colon, the distribution may take any form from involvement of the entire colon to a confinement to various segments. Occasionally the upper parts of the gastrointestinal tract are also involved in a very haphazard manner, but they are not involved in ulcerative colitis.

Finally, I should like to talk about the incidence, in line with the recent change in terminology. In times past, diagnosticians looked at an ulcerated colon and applied the label "ulcerative colitis" to it. They didn't even bother to describe it. The sections were often poor, and in retrospect we can see that those people really didn't look for distinctive features or try to make a distinction. Now, five or six good papers have demonstrated that we probably can do so. We are currently reviewing our material, and though we haven't finished, I think our statistics will fit very closely with those reported by Hawk, Turnbull and Farmer, of Cleveland.* Some of their figures will give you an idea of what we can expect in terms of percentages. In their series of 151 ulcerated colons, 60 per cent were said to show regional enteritis, and 30 per cent ulcerative colitis. In 10 per cent of the cases they were really unable to make clear-cut distinctions. Thus in only one case in 10 is the distinction very difficult to make. In their cases of regional enteritis of the colon, 57 per cent had involvement of the ileum too. Thus the commonest finding was both ileal and colonic involvement. Of the 57 per cent of patients with ileal involvement, 10 per cent had that difficulty after colectomy. Contrastingly, in the ulcerative colitis cases only 10 per cent had ileal involvement, and in only one case had some ileal disease developed after colectomy.

Do patients with regional enteritis of the colon develop cancer of the colon? In the series that I just summarized there were no cases of cancer in the regional-enteritis patients, and only 12 per cent of the ulcerative-colitis patients had cancer. Recently there have been a couple of case reports of cancer developing in patients with regional enteritis of the colon, and I think we have seen one or two such cases ourselves. Thus we shall have to keep our minds open to the possibility that cancer can develop in regional enteritis of the colon.

Dr. Christensen: Thank you, Dr. Kent. I shall finish the hour by discussing some general aspects of regional enteritis. Obviously it is a very devastating disorder, and it now appears to be much commoner than we used to think. It seems correct to say that no one has any idea as to its cause. In the other inflammatory disease of the colon, ulcerative colitis, there also is no idea as to the cause. Therefore nothing can be said about an etiologic separation of these two entities. As I remarked earlier, familial patterns have been observed from time to time, and thus genes may have something to do with the etiology, but that has not been proved. Many people have looked for causative bacteria, viruses or protozoa, but no association between specific organisms and this disorder has been demonstrated. The infectious nature of the disease might be inferred from the fact that it responds to antibiotic treatment. Whipple's disease was not suspected of being infectious until it became apparent that it responded to tetracycline. Crohn's disease, I suppose, has been treated with all manner of antibiotics, but I know of no evidence that a *cure* can be obtained by that means. Nevertheless we must keep in mind that it may be a specific infection, despite the fact that there is no clue as to the nature of the infecting organism.

Its histologic similarity to sarcoid is of little help, since the cause of sarcoid is likewise unknown. Sarcoidosis of the bowel has been described for as long as sarcoid has been recognized. The diagnosis of sarcoid is usually established on the basis of the existence of sarcoid

* Hawk, W. A., Turnbull, R. B., Jr., and Farmer, R. G.: Regional enteritis of colon; distinctive features of entity. JAMA, **201**:738-746, (Sept. 4) 1967.

elsewhere in the body. The fact that they both are granulomas does not mean that the diseases are related, since a granulomatous appearance is quite a non-specific pathologic picture. But I still wonder whether some of the cases of sarcoid of the bowel may not have been Crohn's disease. One common idea about the cause of Crohn's disease is that there is a primary lymphatic obstruction, and that the inflammation and the granuloma formation are the result of an accumulation of fats or fatty acids in the small bowel. I think that idea has not been tested adequately.

Crohn's disease usually involves the ileum or the colon. The entity we are discussing today, Crohn's disease involving the duodenum and perhaps the stomach, is certainly very rare. An idea of its rarity can be derived from a study of Crohn's statistics. Crohn published a monograph in 1958 summarizing his experience with almost 700 cases. In his series of 676 patients, the disease involved the ileum alone in 80 per cent; the ileum plus the jejunum in about 10 per cent; the ileum plus the colon in about 10 per cent; and the duodenum and the stomach in less than 1 per cent of cases. Those figures are from an old series ending in 1958. I recently saw a report of a series of 500 patients seen at the Mayo Clinic that confirms the statistics in the older one as regards the locations of lesions. I think that something like eight cases involving the duodenum or stomach were included in those 500. So the duodenum and stomach are neither becoming commoner, nor becoming more easily recognizable as time goes on.

Dr. Walter M. Kirkendall, Internal Medicine: Is this "indictment by association," or are you proving that this man has Crohn's disease of the gastrointestinal tract?

Dr. Christensen: We have no histologic evidence of it, but I think the x-ray appearance of the duodenum is characteristic enough to justify our saying he has Crohn's disease of the duodenum. I do not know about the stomach. Dr. Kent doesn't agree that the gastric ulcers represent Crohn's disease, so we are deadlocked. One important piece of evidence is that he formed a fistula from his entero-enterostomy to his wound. Fistula formation is very common in Crohn's disease, and I wonder whether that is sufficient evidence on which to base a diagnosis of Crohn's disease. How do you feel about it, Dr. Porter?

Dr. Porter: I don't feel that we can necessarily incriminate Crohn's disease in the development of the fistulae. It was a very difficult anastomosis, there was severe general inflammatory reaction in the area, and there was a strong likelihood of a leak, whether the patient had Crohn's disease or whether he didn't.

Questioner: Could he have had another disease such as Zollinger-Ellison syndrome?

Dr. Christensen: If he did, I think he has been treated properly for it. He has scarcely any stomach left.

The last possibility that I want to discuss is the chance that the gastric ulcers may have been induced by prednisone. I gastroscoped the patient just before his first gastrectomy, and we saw the ulcers that were subsequently seen in the pathology specimens. As I recall, there were four or five ulcers there. They all appeared to be small. We didn't see the giant one that was found at the time of his first operation. He was doing very badly then, and it was our impression that he had Crohn's disease of the stomach. On that basis we gave him oral prednisone. He had been getting rectal hydrocortisone into the remaining colonic stump because of the advanced disease there, and the response had been good. We may have made a mistake, and in retrospect I suppose we were wrong in putting him on prednisone at a time when we knew he had active gastric ulceration, for he certainly bled shortly afterward, and then this catastrophic series of events occurred.

At any rate we must consider the question, "Can prednisone induce gastric ulceration?" Of course that question isn't quite appropriate in this case, since this man had gastric ulcers prior to his corticosteroid medication. A more germane question would be, "Did the prednisone make the gastric ulcers worse?" I can't answer that question.

The question of whether prednisone causes gastric ulcers has been looked at thoroughly by Dr. Alan Cooke. He makes the point that although we commonly think that peptic ulcer (by which I think he means either gastric or duodenal ulcer) can result from prednisone treatment, the evidence in support of our notion is not very good. He cites studies of patients with a variety of conditions other than rheumatoid arthritis who received prednisone,

and shows the incidence of peptic ulceration in those patients. Clearly, not very many of them developed peptic ulceration. The highest figure was 0.1 per cent. That is not different from the incidence of peptic ulceration in the normal adult population not treated with steroids. In retrospective studies of rheumatoid arthritis, the incidence of peptic ulcer varied from 0 to 38 per cent. Thus the idea that prednisone causes peptic ulceration might seem to be supported by some of these series, but we should note that all those patients had rheumatoid arthritis. Cooke makes the point that the rheumatoid arthritis may have disposed the patients to ulceration, rather than the steroid therapy alone, or that it may have been both factors in combination.

If prednisone can cause peptic ulceration in man, the mechanism is not apparent. It is perfectly clear that prednisone treatment or glucocorticoids by mouth can cause peptic ulceration in rats and dogs. That has been demonstrated beyond question. In man, however, the question is still open. If prednisone or glucocorticoids by mouth could induce peptic ulceration, we might suppose that it did so by (1) affecting gastric acid production, (2) affecting pepsin production, or (3) affecting the "mucous barrier." Without boring you with any more experimental results, I shall simply say that in rats and dogs there are species differences as regards the effects of glucocorticoids on acid and pepsin secretion. Therefore the experimental results cannot be supposed capable of duplication in man. Regarding the possibility that glucocorticoids by mouth can alter the mucous barrier, it can be said that the role of the gastric mucus in protecting the stomach from ulceration has never been demonstrated. Since the concept of the mucous barrier is on very shaky grounds, I would reject the possibility on that basis alone.

In conclusion, it seems possible that the prednisone caused this patient to bleed severely from his existing gastric ulcers. I believe, however, that in general this man's trouble is Crohn's disease of various regions of the gut, and that his gastric ulceration was part of that disease.

Dr. Edward E. Mason, Surgery: Dr. Lester Dragstedt has long stressed the idea that gastric ulcers are due to excessive gastrin secretion, and that anything interfering with the emptying of the stomach predisposes to ulceration. In light of the sequence you showed—stricture of the duodenum and finally the development of gastric ulcers—I should guess that the ulcers do not represent regional enteritis, but are secondary to overactivity of the antrum.

Another observation has recently been made regarding people who have extensive intestinal resection and then develop ulcers. If such a person previously had an operation designed to treat the peptic ulcer, he seemed to get along better. I wonder whether an imbalance could have developed in this patient between his stomach and his intestine by virtue of the fact that he had so much disease in his intestine. I wonder whether he isn't hypersecreting now because of his intestinal disease. Also I wonder whether there has been any experience with the treatment of regional enteritis by means of vagotomy. I know that Dr. Clarence Dennis treated some ulcerative colitis patients, ones who were having recurrent disease, by sacrificing more and more small bowel. He found that vagotomy was of some benefit to those patients.

Dr. Christensen: I don't know about vagotomy in the treatment of Crohn's disease. I should think that probably no controlled studies have been made of that therapy, though somebody may have made an incidental observation regarding it that I don't know about.

Yes, it certainly is true that these gastric ulcers may have been the result of gastric-outlet obstruction. After his gastrectomy the patient told me he had been having some symptoms consistent with gastric-outlet obstruction earlier, though he had failed to report them at the time they developed. So it may well have been that his ulcers were the consequence of outlet obstruction from the stomach.

ANATOMIC DIAGNOSES

S-65-8059—Chronic ulceration of colon, probably regional enteritis.

S-68-355—Chronic peptic ulcers, stomach and possibly duodenum.

STUDENTS' DIAGNOSES

1. Chronic ulcerative colitis.
2. Duodenal ulcer.

DR. CHRISTENSEN'S DIAGNOSIS

Granulomatous colitis (Crohn's disease).

President's Page



In the past several years, particularly since the activation of Title XVIII or Medicare and more recently Title XIX or Medicaid, there has been increasing concern among the leaders in industry, government and medicine over the rising cost of health care.

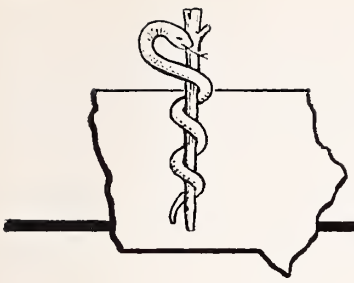
At the time of the push for Medicare, organized medicine told the social planners that their estimate of the cost of this proposal was far too low. They also told them that should the law be passed, medicine would be blamed for the increased costs. Both predictions have been substantiated.

The reasons for the increased costs are many and are far too complex to discuss completely here. However, the sudden granting of free health care to some nineteen million people regardless of economic need has seriously inflated the entire health care field and has been a big factor in the increased cost.

The physician's fee plays a very small part in the overall picture although one economist has suggested that a year's "freeze" should be imposed on physicians' charges. I am not certain that this is practical, but I urge every Iowa physician to take a careful look at his fees and make an honest attempt to hold the line as far as possible. I would also suggest that all physicians acquaint themselves with the facts of the costs of medical care so they can discuss them intelligently with their patients and other segments of the thinking public with whom they come into contact.

C. W. Leibert, M.D.

President



Editorials

THE LOW ROAD

Dr. Soloman Garb, whose name suggests that he should be a character in a James Bond thriller, along with John Strangways, Auric Goldfinger, Dr. Julius No, and Pussy Galore, has written an article for the SATURDAY REVIEW entitled "Neglected Approaches to Cancer."* The article does not state whether Dr. Garb has a "00" rating or not, but it does indicate that he has a rating of Professor of Pharmacology and Associate Professor of Community Health at the University of Missouri. The general thesis advanced is that attention to certain neglected approaches to cancer rather than to the currently "fashionable themes" of molecular biology and viruses would more quickly lead to a cancer cure.

One does not usually turn to the SATURDAY REVIEW for medical and scientific information, but because the editor of the SATURDAY REVIEW seems to have a ready solution for the Vietnam problem, one might suppose that in his wisdom he, or one of his contributors, also has the solution to an equally vexing problem—the cancer problem. Anyway, one must get his learning wherever he can, and surely the READER'S DIGEST does not have a monopoly on all medical matters.

The article by Dr. Garb is interesting. He elaborates on three or four qualities and peculiarities of cancer that have never been adequately appreciated—considerations that seem to have been neglected or bypassed through the years. As an example, he points out that cancer cells, contrary to popular belief, are not rapidly multiplying cells. The significance of this in relation to cancer therapy lies in the fact that if the search for a cancer cure depends on finding a chemical that kills rapidly multiplying cells, then the search will be in vain, for the chemical will attack and kill too many vital normal cells (red cells, bone marrow, gastrointestinal epithelial cells) before affecting the cancer cells. As a practical matter, some of the chemical agents being used now for cancer chemotherapy are limited in their effectiveness by that very fact—by damage done to the bone marrow and the lining of the gastrointestinal tract. Dr. Garb suggests that this may be a reason why "the long term value of cancer chemotherapy has been disappointing."

The article, in similar vein, discusses the fact that a cancer transplanted to the cheek pouch of a hamster will stimulate the development not only of an extensive network of small vessels, but also of a large nutrient artery beginning at a site distant from the cancer. The stimulus for such activity must be a chemical secretion that diffuses from the cancer cells to influence the environment. The author has "not found any evidence of efforts to find out *how* the cancer provoked the host blood vessel response"—a neglected approach to cancer control.

Cancers also have the unique ability to invade neighboring tissue. To do so requires an ability to overcome the barriers of the ground substance surrounding cells as well as the intercellular cement between cells. Little or nothing is known about theoretical cancer secretions that make possible cancer invasiveness—another neglected approach.

Other examples are cited, including mention of the effect of bacterial infections on cancer, and the fabulously rapid (and benign) growth rate of antlers of deer and elk.

Well, Dr. Garb brings the article through with flying colors until the very end, and then he spoils it: he proposes that we spend a total

* SATURDAY REVIEW, June 1, 1968.

of $650 million a year on cancer research, apparently subscribing to the Manhattan Project-type philosophy that if you can build an atomic bomb by spending lots of money, then you can discover the cure for cancer by the same means. He may be right of course, and it would be a small price to pay if so, but are we to believe that this too is just a matter of money? Can you really generate original thinking and creative work with money? Even with lots of money?

DANIEL F. CROWLEY, M.D.

NEW DRUGS

Almost every philosophical subject is a coin with two sides. So it is with the evaluation of new drugs. Prior to Thalidomide, the USA was putting out new drugs every year by the basketful. It is true that most of those drugs were of little clinical value, and in rare instances a drug was capable of doing more harm than good. However, the USA was in the forefront of new-drug production. Since Thalidomide we have been so scared, and the Food and Drug Administration has become so much more stringent in its regulations, that we now are taking a back seat in new-drug production and are getting a great many of our new drugs from abroad. Government regulation, in this as in other fields, can therefore be beneficial, but there is another side of the coin.

Prior to the passage of the 1938 Food, Drug and Cosmetic Act, drugs could be marketed before "clearance" for them was received from the federal government. The clearance procedures established by the 1938 Act were limited to tests for safety. The 1962 Kefauver-Harris Amendments to the 1938 Act added a second basic regulatory requirement: a "proof of efficacy" was demanded as a condition precedent to government approval of new drug applications.

Nowadays because of stringent FDA standards, the development of a new drug requires a minimum of four years before marketing.* Many drugs, of course, take more than the minimum. This new four-year minimum carries with it a tremendous financial burden for the drug houses, and in consequence both they and the AMA are moaning loudly.

When a new drug is recommended for analysis, it is first submitted to the FDA with a New Drug Application (NDA) for review and approval. The first phase of the evaluation is confined to studies in appropriate species of animals, and may take a year for completion. After that testing has been completed and FDA form #1571 has been filed, all the material is assembled for presentation as a Notice of Claimed Investigational Exemption for a New Drug (IND). That form usually requires two months or more for completion. The present IND procedure was created by the 1962 Amendments to the Food, Drug and Cosmetic Act of 1938. The 1962 statute required reorganization of the entire FDA, with an accompanying tremendous enlargement of its manpower. The IND branch of the Division of New Drugs, within the Bureau of Medicine, is always behind time. The probable minimum elapsed time between the submission of an NDA and the filing of an IND is about three years.

The IND must include the following:

1. A description of the drug's chemistry and biologic activity in animals.
2. Specifications regarding the dosage form.
3. Details on all quality-control measures employed.
4. A description of all manufacturing equipment, manufacturing facilities and manufacturing procedures employed.
5. Names and qualifications of, and facilities available to, each investigator who will participate in the initial study.
6. A statement (FDA form #1572) signed by each investigator confirming his understanding of the nature of the drug he will study, guaranteeing that he or his associates will su-

* Barron, B. A., and Bukantz, S. C.: Evaluation of new drugs; current Food and Drug Administration regulations and statistical aspects of clinical trials. ARCH. INT. MED., **119**:547-556, (Jun.) 1967.

pervise every aspect of the study, describing the facilities available to him and agreeing that the drug will be administered only to volunteers or patients to whom a full disclosure of the action of the drug has been made.

7. Protocols setting forth the doses of the drug to be administered per day; the route and duration of administration; and the specific clinical observations and laboratory examinations to be performed.

8. Copies of the detailed data sheets supplied to each investigator prior to his initiation of the study.

New-drug studies in man are divided into three phases. Phase 1 is primarily concerned with determining the dose range. These studies require observation of the metabolism of the drug and its possible toxic effects. Phase 2 is generally supervised by a clinical pharmacologist and, at the earliest, begins 26 to 30 months after the first recommendation for study. This phase includes trials in a few selected patients suffering from the illness for which the drug may be useful. The early Phase 2 trials may occupy six or more months. About three years after the decision to investigate a new drug, plans are made for carrying out Phase 3. The Phase 3 studies must be conducted as controlled clinical trials by a sufficient number of qualified investigators with a large enough sample of patients to yield data upon which a judgment can be made concerning the safety and efficacy of the drug. As many as 150 or more physicians throughout the country may participate in the study. The total number of patients under their observation frequently exceeds 3,000. It is estimated that an additional 16 months will be required for the completion of Phase 3. These investigators base their judgment upon two considerations: (1) Is the drug effective? and (2) Is the drug safe?

It seems that in the investigation of new drugs we have become inundated by paper work. One cannot quarrel with the logic, the propriety or the efficacy of the new FDA requirements and procedures. Once again, however, we are placing our trust in the Central Government, as contrasted with private enterprise. There can be no doubt that private enterprise is much more imaginative than government. Private enterprise can do everything more cheaply than the government can. Private enterprise is also much more productive of results. It seems a tragedy that America is becoming a less imaginative and a less progressive society. It is too bad that we have to rely on foreign nations to develop drugs for us. One would hope that the pendulum will somehow swing back toward the private enterprise system.

—D. A. GLOMSET, M.D.

AN ELEGY

Dr. Willis J. Potts, a Chicago surgeon who was a pioneer in the surgical correction of congenital anomalies of the heart, died in Florida on May 6, 1968, at the age of 73. The following letter from Mrs. Potts addressed to his colleagues and friends at the Children's Memorial Hospital, Chicago, where he worked for so many years, is an eloquent tribute, an epitaph deserved by few men:

"Do not grieve
Because a man died. Men die.
It is the way of life and must be borne.
Rather rejoice because a great and good man lived,
One whose keen mind and skilled surgeon's hands
Were spent in healing sick and deformed bodies,
Whose great compassionate heart went out in love
To all who passed his way.
Such a man lives on and on
In lives of children whom he saved and loved,
In tears and prayers of patients' gratitude,
In high regard of many, many friends,
In tender memories of those whom he loved best
Who shared his joys and sorrows.
Do not grieve because he died—
Rejoice because he lived."

HENRIETTA POTTS

DREAMS OF SUGARPLUMS

The following quotation from the "Round the World" column in the August 17 issue of the LANCET apropos the political situation in the United States today represents the reaction of an English physician in this country serving as a correspondent to that British journal. He evaluates the proposed panaceas for our sociological, economic and international problems in the light of the British experience. It should be required reading for thoughtful citizens, and should influence them in their choice of candidates for political office at all levels of government in the November election.

"The trumpeting and braying of politicians now resound through the land, and from the furthest left to the furthest right voices are raised crying out their nostrums. Of the extremists in both wings we can boast that they are more extreme than their counterparts elsewhere. War overseas and security in the streets seem the main preoccupation of voters, and both are seen in the context of the war on poverty. To someone brought up in Britain in the interwar years both the problems and the proposals to deal with them so optimistically put forward seem depressingly familiar. . . . Public affluence is to increase and this will abolish private poverty. 'Within twenty years such a policy of social investments will end all poverty, eradicate the slums, and erode the economic and social basis of racism.' . . . True, this utopia is going to be the Opportunity State and not the Welfare State, but the ideas, ideals, proposals and mechanisms of attainment seem much the same. The medical profession is to be reformed for it, and the white suburbanites are the main whipping-boys of the idealists at present. There is the same belief in some quarters that when the medical condition is satisfactory to all consumers the major step to alleviate poverty will have been taken. A chicken in every pot and a psychiatrist in every house? Two acres and a cow and a community physician? Oddly enough it was just 20 years since the foundation of the National Health Service and the Welfare State in Britain, and according to the New Left one would then suppose that in Britain poverty had ended, slums had been eradicated, and racism eroded. Unless the LONDON TIMES is misinforming me all this does not seem to have taken place. And I suspect it's not going to here either.

"All this may sound a bit cynical, but it's not meant to be. In the old days I lent my reedy, quavering tenor to the chorus, and I believe that radical changes are necessary here. But somehow, despite all the masses of data analyzed, the treatments have seemed to be ineffective. This suggests to my innocent medical mind that perhaps the diagnosis was wrong, and we have been at our old game of treating signs and symptoms but not attacking the disease. Perhaps our theories of aetiology are wrong. A country as vast, rich and resourceful as this could perhaps embark on a variety of experimental approaches and consider the results of local experiments before national legislation is contemplated. But can political and scientific minds ever meet? All I know is that in the controversies I have a sense of *dèjá vu.*"

One wonders what that transplanted Briton —in fact what the peoples of the world—think of our political system and our political situation after the sad spectacles of violence and confusion and conflict during our recent national conventions.

Candidates promise all things to all segments of society, but just how they are to accomplish them is left nebulous. It is disappointing that no emphasis has been given to the recognized fact that security, happiness, contentment and self-esteem are the results of individual effort, and that no benevolent government can provide them. It would seem high time for the United States and her citizens to tighten belts and seek desired goals by hard work, initiative, self-reliance, self-discipline, thrift, tolerance and respect for law and order. There are no simple solutions for our problems; they can be resolved only by individual effort at all levels of society.

Mr. Wilbur J. Cohen, secretary of Health,

Education and Welfare, has declared that poverty can be abolished in the United States by 1980, and that the nation's poor have been reduced from 40 per cent of the population in 1930 to less than 13 per cent today. He is quoted as saying: "There is widespread agreement that poverty can be eliminated—and that it will take money. But money must be accompanied by far-reaching, penetrating approaches, by bold and coordinated programs—both public and private—that provide inter-related services to the poor. The old Band-Aid treatment will no longer suffice." That a "greenback poultice" can eliminate a malady as old as civilization itself would appear to be more of a political promise than a reasonable prognostication.

In the coming election, vote wisely. If the ideals and values and purposes of the United States are to be preserved, the electorate must send to Congress representatives who will battle to protect our precious heritage and, among other things, to halt an inflation which jeopardizes the security of every citizen!

TAKING THE JOY OUT OF LIFE

A recent article by Barboriak and Meade, of the Marquette School of Medicine, tells of the results of the preprandial administration of 4 oz. of 100-proof bourbon whiskey (50 per cent alcohol) upon postprandial lipid levels.* Blood was drawn before a test meal and then at intervals following the meal, and the successive levels of plasma triglyceride were determined.

The authors report that in the first group of subjects given a test meal of 105 Gm. fat, not preceded by alcohol, the average preprandial plasma-triglyceride level was 119 mg./100 ml., and that six hours after the meal the triglyceride level had increased by an average of 114 mg./100 ml. When the same subjects had been given 4 oz. each of whiskey, their initial triglyceride level was 108 mg./100 ml., and after six hours it had increased by 182 mg./100 ml.

A similar alcohol-induced rise in postprandial lipemia was observed in subjects who were given a test meal of 63 Gm. fat. In those who were given the whiskey before the meal, the plasma triglyceride level increased after six hours to 170 mg./100 ml. from an initial level of 104 mg./100 ml. By contrast, in those not given the alcohol there was an increase of 66 mg./100 ml. over the initial level of 109 mg./100 ml. three hours after the meal, and at six hours the increase amounted to 49 mg./100 ml.

Thus in this study the rise in plasma triglyceride due to preprandial alcohol was 121 mg./100 ml. when the test meal contained 63 Gm. fat, and a rise of 68 mg./100 ml. following a test meal containing 105 Gm. fat. It was apparent that a reduction in the dietary fat content did not appear to decrease the effect of alcohol on the serum-lipid response. The reason why the lipid increase was greater following the meal with the lesser amount of fat is not entirely clear. It is postulated that perhaps the high plasma-triglyceride levels seen in both groups after preprandial alcohol approached the limits of fat-handling capacity, and as a result the post-alcohol elevation of blood lipids appeared unrelated to the amount of dietary fat.

The authors point out that the amount of alcohol taken before a meal seems to be an important factor in the production of lipemia. Others have shown that an ounce of whiskey before dinner and another ounce with breakfast, in both normal and hyperlipemic subjects, resulted in no enhancement of blood lipids. However in subjects who had fasted overnight and were given 2 oz. of whiskey with their breakfast, there was a marked enhancement of lipemia. The present study indicates a pronounced lipemia developed after an overnight fast and the drinking of 4 oz. of whiskey before the meal.

Barboriak and Meade conclude with the statement: "It would seem, therefore, that in-

* Barboriak, J. J., and Meade, R. C.: Enhancement of alimentary lipemia by preprandial alcohol. AM. J. MED. SCI., 255:245-251, (Apr.) 1968.

gestion of alcohol before a meal can lead to a substantial enhancement of the usual lipemia. This effect can be observed even with moderate amounts of dietary fat. The possible physiological and pathological implications of the lipid rise following preprandial alcohol remain to be explored."

Despite the implications of this study, we hope, doctor, that after sipping your preprandial drink, you will not see atheromata reflected from the bottom of your glass. Someone always seems to be taking away one of life's little pleasures!

FUNDS FOR THE FIGHT AGAINST ALCOHOLISM

The State of Iowa has been engaged in the sale of liquor since 1935, and according to the annual report to the Liquor Commission its sales for the year 1966-1967 amounted to $57,693,574 and its net income therefrom was $13,479,334. In addition to the profit from the sale of liquor, there was considerable income from the state's share of liquor license fees, a 10 per cent tax collected by licensees on every drink served to thirsty patrons, and special permit fees—all of which raised the state's net liquor income for that fiscal year to $19,476,500.48. This was an increase of $1,225,909 over the income for the previous fiscal year.

The report for the fiscal year 1967-1968 (ending June 30) is not yet available. However it is predicted that it will again show increases in both sales and profits, just as the reports have, each year, since 1935. As a consequence of recent legislation, the 10 per cent tax on liquor-by-the-drink, collected by licensees, has been replaced by a 15 per cent tax on purchases by licensees at state liquor stores. Not included in the Commission's report is the sales tax collected on every item sold by the state liquor stores, and on every drink dispensed over a licensed bar.

As provided by law, 5 per cent of the gross income for the fiscal year was distributed to incorporated cities and towns, and 5 per cent was distributed to the 99 counties. This amounted to $2,884,673 for each of those groups. The distribution was made according to population. Then the remainder of the liquor income, in the sum of $14,044,370.23, was transferred to the general fund of the State of Iowa. Recent legislation has increased the distribution to cities and towns from 5 per cent to 10 per cent of gross sales.

That the sale of liquor in Iowa is big business is startlingly portrayed by figures covering all of the 33 years that our state government has been engaged in this activity. Sales since 1935 have totaled $1,073,175,357, and profits have totaled $246,477,144.

How the political subdivisions are to spend the liquor money that is sent them has been left for them to decide. It is hoped that each of them will use its share to promote human welfare, but human welfare is a concept that differs, depending upon the scales of values of the members of governmental boards. In various instances the funds doubtless have been used to help defray the cost of resurfacing Main Street, the expense of reconstructing the approaches to the Cherry Creek Bridge, or the cost of a new fire truck.

A sad and less dramatic page in the Liquor Commission's annual report relates that there were over 16,000 arrests for intoxication; some 2,600 arrests for driving while intoxicated; and a total of some 26,000 liquor violations. Convictions totaled 23,655. No statistics could adequately document the impact of alcoholism on the individual, the home and family, the community, the economy!

With profits of millions and millions of dollars each year, it is incredible that the General Assembly of Iowa has made no specific allocation of funds for detoxification of the acute alcoholic or rehabilitation of the chronic alcoholic. The few detoxification centers and halfway houses we do have struggle along precariously from day to day on funds begged from generous individuals and organizations.

It would seem appropriate for the medical profession, and for individual doctors, to attempt influencing the Legislature at its next session to make a suitable, specific appropriation for the treatment of citizens addicted to alcohol.

IMMUTABLES

The following is a quote from Mrs. Robert K. Wilson, Sr., president of the Woman's Auxiliary, Alabama State Medical Association, in the July issue of the JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA:

"Another thing that crossed my mind while I was traveling was that the changes in the world have brought about many changes in the practice of medicine, and in the life of the doctor and his wife and family. Adjustments have had to be made, and more will have to be made in the days ahead. Some things, however, never change, and these we need to remember: Integrity . . . Compassion . . . Courtesy . . . Idealism . . . Love . . . God."

MIRACLES OF THERAPY SIXTY YEARS AGO: A TESTIMONIAL

Hot Springs, Arkansas
February 20, 1908

I have used Waterbury's Metabolized Cod Liver Oil Compound, with and without Creosote and Guaicol, since May, 1903; have prescribed it for all forms of Anemia, and without a single case ever having failed to show marked benefit therefrom. It is my custom to prescribe it in all catarrhal conditions, whether nasal, bronchial or alimentary, and I have never seen any patient, whether old or young, in which it was not well tolerated. I find it most useful in the upbuilding of the blood, made anemic by Syphilis, which is as we all know, a disease that causes the most pernicious form of blood debility.

In conclusion will say that in all cases of Anemia I rely on this preparation as a sheet anchor, and would not consider I had discharged my duty to those applying to me had I not done so.

Sincerely yours,
CHARLES DAKE, M.D.

Plan to Attend the

22ND AMA CLINICAL CONVENTION

in Miami Beach

December 1-4, 1968

Iowa Rules Governing Temporary Medical Licenses

The 60th General Assembly of Iowa enacted a law providing for the issuance of temporary medical licenses. At their discretion, the medical examiners may issue a temporary certificate authorizing the licensee to practice medicine and surgery whenever, in their opinion, a need exists therefore and the person possesses the qualifications that they have established for such a licensee. In each instance the medical examiners shall determine those eligible for this license.

No requirements of the law pertaining to regular, permanent licensure shall be mandatory for this temporary license, except as specifically designated by the medical examiners. The granting of a temporary license, moreover, does not indicate in any way that the person so licensed is eligible for regular licensure, nor are the medical examiners in any way obligated subsequently to grant such a person a regular license.

The fee for a temporary license is $25, and the license is valid for a period not to exceed one year from the date of issuance. It is non-renewable. The medical examiners may cancel a temporary certificate at any time, without a hearing, for any reasons that they deem sufficient.

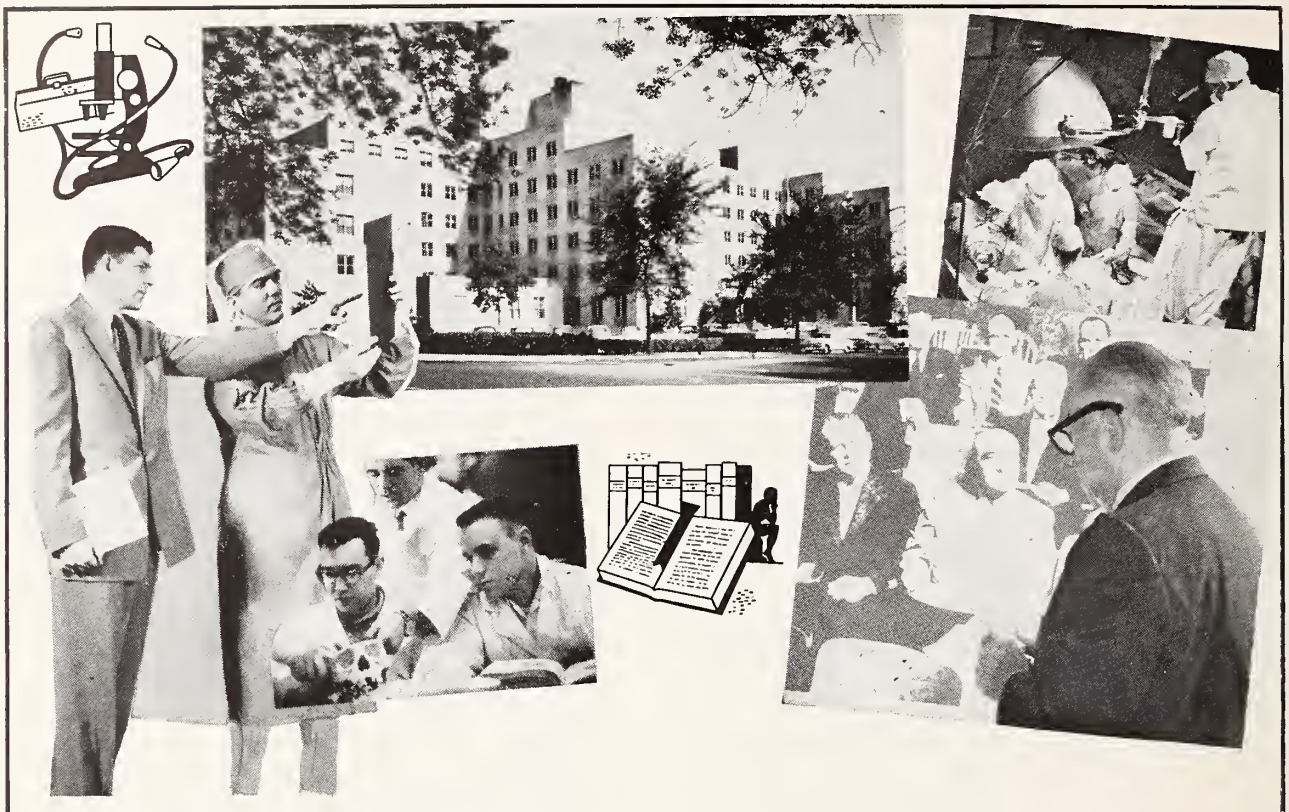
The application for a temporary medical license must be filled out and sent to the office of the Iowa State Board of Medical Examiners, 503 Empire Building, Des Moines 50309, at least 15 days prior to a monthly board meeting. It must be accompanied by the following: (1) a photostatic copy of the applicant's medical diploma; (2) a photostatic copy of his internship certificate; (3) a photostatic copy of his National Board certificate or State Board of Medical Examiners certificate by examination; and (4) a letter from the physician for whom the applicant intends to practice, stating the need for issuance of a temporary license.

Iowa Thoracic Society Grants and Fellowships, 1969-1970

The Research and Medical Education Committee of the Iowa Thoracic Society will accept applications for medical research grants in the areas of tuberculosis, respiratory physiology and associated fields. Grants are made to non-profit institutions in direct support of a particular investigator for a specific program of research under his direction.

Applications will also be considered for research and advanced clinical training in the field of respiratory diseases. Stipends will vary according to the qualifications and needs of the applicant.

Application must be received on or before November 1, 1968. Application forms may be secured from the executive director of the Society, 1818 High Street, Des Moines 50309.



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- *Honors and Scholarship Program* -- Designed to attract students of high promise to careers in medicine—meetings, personal contacts and written materials will be employed. Medical school scholarships will be available to those who need them.
- *Undesignated Contributions* -- Money not designated for any specific AMA-ERF program will be placed in the general fund and the Board of Directors will decide on its use, depending upon need.

AMA-ERF

American Medical Association
Education and Research Foundation
535 North Dearborn Street
Chicago 10, Illinois

The "Slow Virus" Phenomenon

Virologists investigating multiple sclerosis share a problem with their colleagues in cancer research. Both groups have found that damage caused by viruses in animals is very similar to the damage associated with cancer in humans. Cancer researchers have been able to isolate some 20 viruses that can cause tumors in animals, but so far they have been unable to identify a single virus that can cause cancer in humans. MS researchers have the same problem: they have isolated a half-dozen viruses capable of causing neurological damage in animals similar to that caused by MS in humans, but they have yet to isolate a virus which can be shown to be responsible for multiple sclerosis.

Dr. Hilary Koprowski, one of America's most distinguished virologists, is attempting to clarify the role of a particular kind of viral agent in neurological disease. The director of Philadelphia's famed Wistar Institute, he is focusing on a class of agents known as the "slow" viruses—slow in the sense that they have the unique ability to exist in the body for long periods of time before they produce any signs of disease.

It is believed that these agents are responsible for what, in 1954, Dr. Bjorn Sigurdsson, an Icelandic veterinarian, termed "slow-virus" infection. "Slow-virus" infection refers to an infection of the host in which the viral agent continues to multiply over a long period of time. The agent goes through a long incubation period and produces a progressively worsening abnormality in the host over months and years.

Slow-virus infection differs from "garden-type" virus infection—the more common ones being measles, polio and encephalitis. The garden-type agent enters the cell, begins to multiply rapidly and thus destroys the cell. The incubation period of these viruses is short, and visible signs of infection in the host rapidly become apparent. The infection is caused either by the destruction of the cell or by the production of a cellular "toxin" which elicits a rapid immunological response from the host. In contrast to the slow viruses, in most cases, the garden-type virus disappears from the host soon after the appearance of the disease.

It is no longer difficult, says Dr. Koprowski, to identify slow viruses that are responsible for chronic neuropathies in animals. "One need only find a host which is susceptible to the disease. Then one can spot the responsible virus even though it may have been incubating for six years or more." Two central nervous system disorders of sheep—scrapie and visna—can readily be transferred to other sheep. Scrapie, a slowly progressive neurological degenerative disease of sheep and goats, which causes the affected animal to rub and scratch at its onset, has been known in Europe for over two hundred years. It was first transmitted to healthy sheep in 1936 and has since been passed on to goats and mice. Kuru, a progressive neuropathy of man (but not essentially a demyelinating disease), has proved to be transferrable to the chimpanzee. Kuru is a disease which exists only among a familial group of people who live in the Eastern Highlands of New Guinea. At one time, this disease accounted for over half of the deaths among these people. Gajdusek and Gibbs have taken brain material from kuru victims, injected it into the brains of chimpanzees, and produced an illness that bears a close clinical and pathological resemblance to kuru.

Dr. Koprowski is especially interested in experiments carried out by Dr. Pal A. Palsson and his colleagues at the Institute for Experimental Pathology at the University of Reykjavik, Iceland. They injected brain material from an MS victim into Icelandic sheep, then reported that the animals developed a disease syndrome resembling scrapie. Brain and spinal cord lesions appeared to be identical with those in animals infected with scrapie. However, the scrapie virus is now considered a biological anomaly since it is extraordinarily tiny and, though most viruses cannot, it can be boiled and can withstand prolonged exposure to ultraviolet light.

Under National Society sponsorship, Dr. Koprowski and Dr. W. J. Hadlow from USPHS Rocky Mountain Laboratory will go to Iceland in September to observe the evidence firsthand. Was virus transmitted from an MS brain to sheep? The answer may depend on the answer to still another question: Are Icelandic sheep more susceptible to agents of chronic neuropathies than are other sheep? Dr. Palsson and Dr. Gadmundur Petursson, director of the University's pathology institute, have invited Dr. Koprowski to review the available data.

Whatever the outcome of this inquiry, scientists will continue to grapple with these puzzling questions: If viruses cause chronic neuropathies in man, why are they so difficult to isolate from the affected tissue? Why is it that they cannot be identified by inoculation in animals or tissue culture, or by any well-established laboratory procedures?

"Some viruses are extraordinarily elusive," says Dr. Koprowski, "because of the agents with which they are closely associated. In other words, these viruses exist side by side in infected tissue with a considerable variety of 'inhibitors' that are formed when a virus enters a cell. In some instances the inhibitor may prove to be an antibody that has become stuck to the virus, thus masking its presence in the tissue. There may be other types of inhibitors that operate specifically against a given virus in a given tissue.

"This class may or may not be identical with interferon, a powerful inhibitor caused by virus infection of animal tissue. Although we still have a good deal to learn about them, inhibitors of this





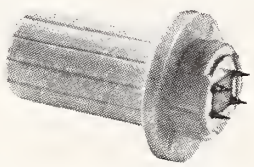
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sort clearly add to our difficulties when we want to show the presence of viruses in affected tissue."

The future holds promise, however. Dr. Koprowski points out that there are now available a number of laboratory techniques that can be used to determine the presence of a virus in its host tissue. "One of the more recent developments is the fusion of two different cells into a new cell line with the properties of both of its parents. Tumor viruses, notorious for their latency, have yielded to this technique. Hidden in the host cell, they become activated—and can thus be isolated—once the host cell has become fused with a susceptible cell." Dr. Koprowski notes that the cell fusion technique has so far been limited to work with tumor viruses. But he believes it may eventually become applicable in all chronic viral infections, including those of the nervous system. "This is a prospect that must intrigue every worker interested in the problems of multiple sclerosis on a laboratory scale."

Mercy Hospital Medical Day

The medical staff of Mercy Hospital, Des Moines, will present its annual scientific program and dinner, known as Mercy Hospital Medical Day, on Wednesday, October 16. The afternoon program, scheduled to begin at 1:30, will take place in Mercy Hall, at the Hospital, and will include "The Role of Surgery and Hormones in the treatment of External Endometriosis," presented by Dr. Roger Scott, a professor of gynecology and obstetrics at Western Reserve University; "Dysfunctional Uterine Bleeding," discussed by Dr. William C. Keettel, head of obstetrics and gynecology at the U. of I. College of Medicine; "Postprandial Blood Sugar as an Indicator for Intravenous Glucose Tolerance in Pregnant Patients," discussed by Dr. Thomas Lebherz, an associate professor of obstetrics and gynecology at Western Reserve University; "Preventive Medical Aspects of Obstetrics and Gynecology," presented by Dr. Eugene Slowinski, chairman of the Department of Obstetrics and Gynecology at Creighton University; and "Circulating Tumor Cells in Patients With Carcinoma in Situ of the Uterine Cervix," discussed by Dr. Joseph Song, the chief pathologist at Mercy Hospital, Des Moines. The AAGP has approved the program for 3½ hours of credit.

The medical staff at Mercy and the Polk County Medical Society are co-sponsoring a social hour at 6:30 and a steak dinner at 7:15 at the Hotel Fort Des Moines for physicians and their wives. Entertainment will be provided by "The Singing Doctors" from Springfield, Missouri. They are really doctors, but they are also recording stars.



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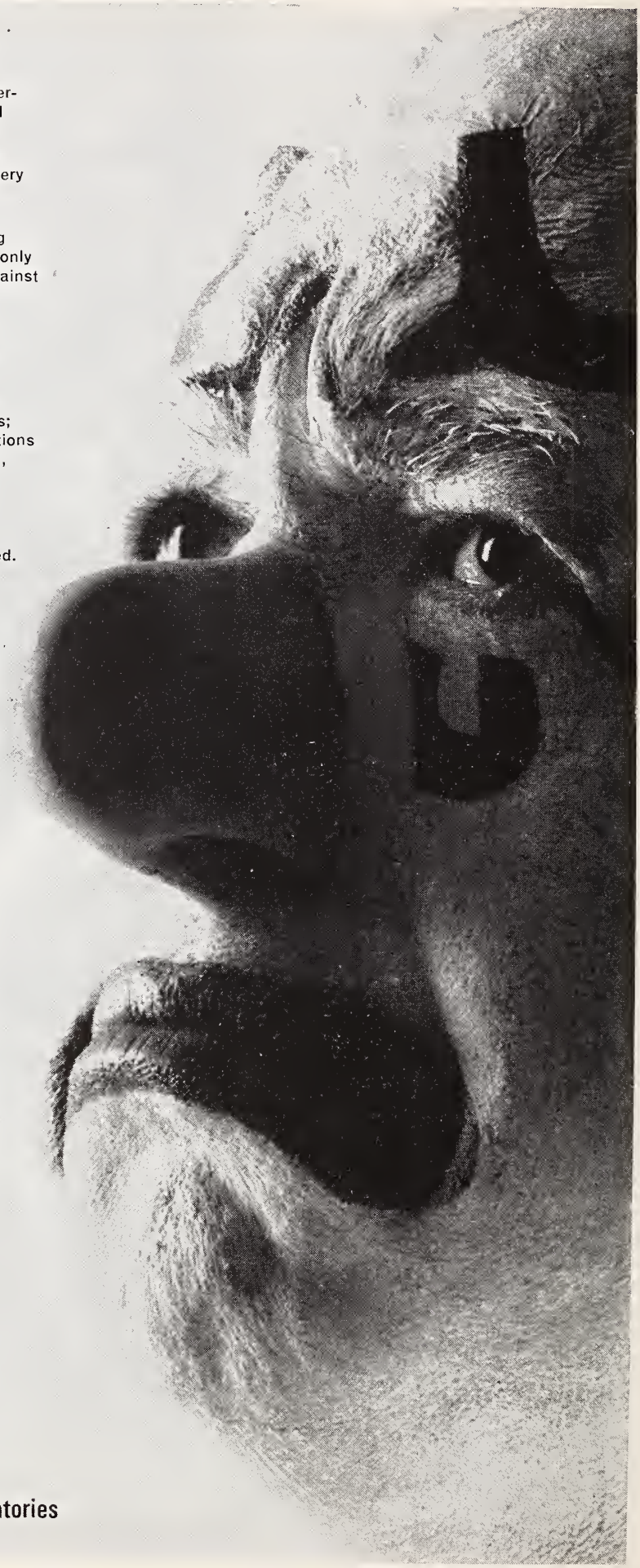
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University Hospitals DRUG LETTER

Cholesterol-Lowering Agents

DONALD L. WARKENTIN, M.D.

Atherosclerosis as a cause of death and disability has increased tremendously in the last few decades. Among the factors implicated in the genesis of this disorder are diet, heredity, stress, obesity, hypertension and certain metabolic disorders such as diabetes and hypothyroidism. Since preventive treatment directed solely against the basic causes of atherosclerosis may be impractical, a more logical approach is to try to block the formation of the characteristic lesion of atherosclerosis, the atheromatous plaque.

Because cholesterol is the principal component of the atheromatous plaque, measures to reduce the level of cholesterol in the blood may reasonably be expected to prevent, or at least retard, the development of atherosclerosis. Dietary restriction of ingested cholesterol and saturated fats is advisable for all patients, but for various reasons may not be sufficient to achieve optimal serum cholesterol levels in the range of 180-220 mg. per cent. Various drugs have been used as cholesterol-lowering agents, and the discussion that follows lists the most important of them and comments briefly about their modes of action and side effects.

Sitosterol is frequently to be found in foods derived from plants. Sitosterol reduces the absorption of cholesterol in the gut. Its use in the therapy of hypercholesterolemia is limited, since only a moderate reduction in the serum cholesterol can be achieved by that means. Furthermore, it is expensive.

Dextrothyroxin is a useful cholesterol-lowering agent, although its mode of action is not completely understood. It is assumed that the drug increases the hepatic metabolism of cholesterol through enhanced bile acid formation. Extensive clinical studies indicate that dextrothyroxin does not greatly increase the basal metabolism rate in euthyroid patients, but hypothyroid patients may be somewhat more sensitive to the metabolic effects of the drug. Long-term administration of dextrothyroxin does not appear specifically to produce serious cardiovascular effects, except for the enhancement of angina pectoris in patients with coronary heart disease. The effectiveness of dextrothyroxin is still under evaluation. The selection of the proper dosage for the individual patient is critically important. There may be a tendency for a lessening of the beneficial effects with the passage of time.

Nicotinic acid is a B-complex vitamin which effectively reduces serum cholesterol by incompletely understood mechanisms. A major disadvantage is the high incidence of side effects, which include flushing, gastric irritation, anorexia, nausea and/or vomiting. Disturbances in liver function have also been reported. Proper dosage selection may enable patients to benefit from this drug without experiencing its adverse side effects.

Conjugated estrogens retard the development of atherosclerosis in an unknown manner. Their use is based on what appears to be a protective effect of these substances which cause women to be relatively free from the ravages of atherosclerosis during the years preceding the menopause. Side effects are primarily those associated with feminization, and thus the drugs may be unacceptable to the males who could be expected to benefit most from them. Conjugated estrogens are most effectively used in the postmenopausal woman with hypercholesterolemia.

Cholestyramine (Cuemid) is a drug which significantly lowers serum cholesterol by increasing the biliary excretion of sterols in the form of bile acids. The increased biliary excretion is secondary to the action of the resin which binds bile acids in the intestine and increases fecal excretion. It is not absorbed from the gut and is remarkably free of unwanted side effects. Its limitations lie in the rather large doses of the oral preparation that are required, and in their possible interference with absorption of fat-soluble vitamins. From the standpoint of safety and effectiveness, cholestyramine is probably the best of the new drugs that lower serum cholesterol.

Clofibrate (Atromid-S) is a drug just recently released for general use which lowers both serum cholesterol and triglyceride—primarily the latter. It may have little effect on serum lipids unless the serum triglycerides are elevated. The mechanism of action is not presently known, but inhibition of the hepatic metabolism of triglyceride has been suggested. The drug may potentiate the effect of anticoagulant drugs and cause occasional nausea. Clofibrate has caused no severe toxic effects to date, but the true incidence of untoward reactions will not be known until it has been in clinical use for several years.

Rather than the agents listed above, adequate dietary restriction of cholesterol and saturated fats still offers the best approach to the lowering of serum cholesterol. Since for certain people such a diet may be intolerable or impractical, choles-

(Continued on page 1070)

The two articles published under this heading this month appeared initially in the May and January, 1967, issues (respectively) of DRUG LETTER, a monthly intramural publication of University Hospitals, Iowa City. They are reprinted at the suggestion of the Clinical Pharmacology Committee at the University, and with the permission of the authors. Dr. Warkentin is an assistant professor of internal medicine, and Dr. Kripke is an assistant professor of pediatrics at the U. of I. College of Medicine.

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tyramine offers a safe, effective means of achieving the same result, and if current clinical investigation supports the drug's safety, it will become a useful tool. Dextrothyroxin and nicotinic acid are helpful, but their side effects seriously limit their acceptability and usefulness. Conjugated estrogens seem to have only limited application, but they require further study. The clinical effectiveness of clofibrate has not yet been established, but intensive studies are underway.

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Current Immunization Program

SIDNEY S. KRIPKE, M.D.

The following table is the current immunization program being followed by the Child Health Clinic in the U. of I. Pediatrics Department. It closely follows the American Academy of Pediatrics' REPORT OF THE COMMITTEE ON THE CONTROL OF INFECTIOUS DISEASES, 1966, pp. 1-9, particularly and it should be noted that both programs are intended only as flexible guidelines for adequate immunization.

DIPHTHERIA, PERTUSSIS AND TETANUS

The combined antigens containing alum-precipitated or adsorbed diphtheria and tetanus toxoids and pertussis vaccine are considered preferable to "plain" or fluid mixtures because they produce more prolonged immunity to diphtheria and tetanus, and greater antigenic stimulation against pertussis in early infancy. The fluid preparations may be more advantageous in the presence of an epidemic, since the primary course of three injections can be compressed into a three-week period, resulting in prompter protection. However they afford less-lasting immunity, and should be followed by the "depot" antigens.

IMMUNIZATION PROCEDURE		
2 months	1st DPT (0.5 cc.)	L thigh
	1st oral Polio (Sabin) Polyvalent	
3 months	2nd DPT	R thigh
4 months	3rd DPT	L thigh
	2nd oral Polio (Sabin) Polyvalent	
6 months	3rd oral Polio (Sabin) Polyvalent	
9 months	TB (Tine)	
12 months	Measles (live) vaccine 0.5 cc.	
12-24 months	Smallpox vaccine	
15-18 months	DT booster (0.5 cc.)	
	Booster oral Polio (Sabin) Polyvalent	
2 years	TB (Tine)*	
3 years	TB (Tine)*	
4 years	TB (Tine)*	
4-5 years	DT booster	
5-6 years	TB (Tine)*	
	Smallpox vaccine	
	Booster oral Polio (Sabin) Polyvalent	
8 years	DT booster (adult type)	
	TB (Tine)*	
10 years	TB (Tine)*	
12 years	DT booster (adult type)**	
	Smallpox vaccine	
	TB (Tine)*	

* Optional; see "Tuberculin Testing" on next page.

** After age 12 follow procedure recommended for adults; i.e., smallpox vaccine every 5-7 years, and tetanus toxoid booster every 10 years, like the DT booster.

Injections should be made into the lateral thigh muscles or the deltoid in order to protect against possible sciatic-nerve injury which may occur if the gluteal muscles are used.

Local tenderness and erythema may occur at the injection site, especially if the inoculum goes subcutaneously, and transient fever following injection is common. Acetylsalicylic acid, 65 mg. (1 grain) per year of age, to a limit of 5 grains, may be given to counteract these symptoms. As with any other immunization, only well children should be inoculated. Other reasons for delay in starting immunizations are the presence of cerebral damage, an outbreak of poliomyelitis (depot DPT), and short-term corticosteroid or immunodepressant therapy (since such children may have diminished antibody response to active immunization). In infants with cerebral damage, severe febrile reactions or convulsions, active immunizations should not be initiated until after one year of age.

Since recall injections of pertussis vaccine are not considered necessary after the first year of life, and because this antigen can be a significant cause of post-vaccinal encephalopathy, the initial series or booster inoculations of DT one year following the initial series and subsequently throughout life contain only the diphtheria and tetanus toxoids. After six to eight years of age the "adult type DT" should be used to minimize local and systemic reactions which are more likely to occur in the adult when "pediatric DT" is used.

POLIO VACCINE

The interval between oral polyvalent polio doses should be six weeks or longer to insure successful immunization by preventing viral interference in the gastrointestinal tract. Although the Sabin vaccine is a live-virus vaccine, it may be given during steroid therapy, in contrast to smallpox and measles vaccines (live) which are contraindicated during steroid therapy. There are no side effects from oral polio vaccine.

SMALLPOX IMMUNIZATION

In non-endemic areas, initial vaccination against smallpox is now advised during the cool season for children between the ages of 12 and 24 months. It has been found that there is less chance of the severe complications of smallpox vaccination (progressive vaccinia, vaccinia gangrenosa, eczema vaccinatum) in this age group. However in endemic areas, vaccination should be started earlier, and anticipated travel to endemic areas is an in-

dication for immediate vaccination. The multiple-puncture technique is advised. In the United States it is probably better to restrict the number of punctures to two or three. No child with eczema, other forms of dermatitis or with a sibling who has eczema should receive a smallpox vaccination because of the danger of eczema vaccinatum. The fever which follows the vaccination by about a week is a part of the process and usually occurs at the height of the local reaction. Vaccinia immune globulin (human) may be useful for the treatment of serious complications of smallpox vaccination and may be obtained from a Regional Blood Center of the American Red Cross.

TUBERCULIN TESTING

A tuberculin test should be given during the first year, prior to measles vaccination, since measles vaccination may render the individual anergic to the tuberculin reaction for one month. The frequency of repeated tuberculin tests is dependent upon the risk of exposure and the prevalence of tuberculosis in the population.

MEASLES (RUBEOLA) VACCINATION

All infants should receive measles vaccination by one year of age. By that time virtually all infants are depleted of passively acquired maternal antibody and are susceptible to wild measles. The Edmonston strain is a live vaccine requiring simultaneous administration of measles immune globulin (human) 0.01 ml./lb. to protect against the side effects produced by the vaccine. These are fever, possibly a rash and other symptoms of wild measles 5-14 days after injection. A more highly attenuated vaccine, the Schwarz strain, requires no measles immune globulin. Because of unusual systemic and local reactions occurring with its use, inactive measles vaccine should be deleted from immunization schedules.

A further note on the use of measles immune globulin for modification of wild measles is probably in order. Although in doses of 0.02 ml./lb. it can modify the severe symptoms of measles, it will not prevent or modify the occurrence of post-measles encephalitis. Therefore the use of measles immune globulin for modification of measles should probably give way to a preventive dose of 0.1 ml./lb. followed six weeks later by active measles vaccination.

MUMPS VACCINE

Live attenuated mumps virus vaccine is not being used routinely in the Child Health Clinic. Its use may be considered in the following special groups of individuals if they have not had clinical mumps:

1) Boys who are approaching puberty.
2) Adolescent and adult males.
3) Children living in closed institutions (summer camps, other similar epidemiological circumstances).

There is insufficient data as yet on which to judge the possible value of live attenuated mumps vaccine in preventing disease following exposure.

Scientific Showcase to Be Displayed At AMA Clinical Convention

A show case of scientific achievements and studies will be seen in Miami Beach, Fla., December 1-4, when the American Medical Association holds its Twenty-second Clinical Convention. A total of 125 scientific exhibits, covering a variety of medical disciplines, will be set up at the convention center. The displays will be available for viewing from noon Sunday until the session ends Wednesday afternoon.

Live color telecasts dealing with medical problems will be shown on Monday, Tuesday and Wednesday. The television programs will cover obstetrics-gynecology, cerebral vascular disease, and amputee and stroke-patient rehabilitation.

Also, about 30 medical motion pictures will be shown as part of the scientific program. At least five premiere showings are planned. Among these are "Shock and Recognition and Management" and "Granulomatous and Ulcerative Colitis: Diagnosis and Differential Diagnosis." A film symposium, with a panel discussion, is planned on "Problems of Chest Pain." A question-and-answer session will be included.

The Scientific Program for the 1968 Clinical Convention will be published in the October 21 issue of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Continuing education will get big emphasis at the Clinical Convention. On December 2, 3 and 4 postgraduate courses will be offered on diabetes, fluid and electrolyte balance, and thyroid disease. Two one-hour sessions will be held daily.

And four breakfast roundtables, which have proved to be highly successful at past sessions, are scheduled. In addition, there will be clinical workshops on eye problems, cardiovascular disease, diabetes and office urology.

Morning topics December 2 include the anemias, thrombophlebitis, and obstetrics. The afternoon program includes discussion of white cell disorders and diseases of the lymph nodes, management of claudication, cerebral ischemia due to neck vessel occlusion, and gynecology.

Tuesday, December 3, topics are cardiology, gastrointestinal diseases, proctology, and—in the afternoon—new approaches in cardiology, bacterial skin infections, and the skin and sunlight.

Discussions on sex will be held Wednesday morning, December 4, to include such topics as marital problems, changing sex values, preadolescent and adolescent sex education, and sex and the senior citizen. Hypertension and the kidney also will be studied at the morning session.

Wednesday afternoon's topics include pulmonary diseases, respiratory ills in children, and more on the kidney.

Scientific sessions will be held in Miami Beach Convention Hall. Total registration is expected to be about 10,000, including 4,500 physicians.

MEDICAL ETHICS

Medical Ethics and Discipline

CHARLES C. SMELTZER, M.D.
Knoxville, Tennessee

I find it very difficult to speak, on an occasion like this and to a a group like this, on the subject of medical ethics and discipline. First of all, you are educated, intelligent, experienced and ethical. I do not want to carry coal to Newcastle. Second, any discussion of a subject of this magnitude demands that we be on the same wavelength. Participating, as I am, in a communications institute, I know you are tuned in. It is up to me to send out a recognizable signal.

Being on the Judicial Council and having access to the files of the Council, I can review the correspondence from patients who complain about physician misconduct. Being a practicing physician in a thriving, medium-sized community, and being active in medical and civic affairs, I see what actually goes on in everyday life—everyday life as experienced in all walks of life.

When I read letters or when I read published articles in the periodicals or the press regarding alleged ethical deficiencies in the practice of medicine, I can find it very easy to say "if this is all people can complain about, they really are in pretty good shape."

I do not malign or belittle those who complain. I make the point that if all they can find wrong is as trivial as letters, speeches, and the like indicate, then medicine can feel proud that it has major ethical problems well under control. Minor ethical problems exist because of a breakdown in communication. For example, some physicians continue to use prescription blanks furnished by a drugstore and having the name and address of the store embossed on it. The answer is simple and logical. We physicians believe a patient should have free choice in choosing his physician. Should he not have free choice, without duress, in choosing his pharmacist?

In my experience, I find that there are some, who are not physicians, who are experts on ethics simply by self-appointment. These individuals would like to impose their concept of what is right and wrong on the physician. By fiat, these pseudo-ethicians decide what the physician should or should not do. They seem to think it is ethically wrong for a physician to own a good car, to have a nice home, to take a long vacation. They criticize the physician for anything that comes to mind. I'm not exaggerating. One man complained that a physician was "unethical" because he was not wearing a starched white jacket during the examination of the man's wife.

One businessman, for example, read an article in the NEW YORK TIMES about a physician who was arrested for homicide and demanded to know why "medicine" had not revoked the physician's license. A father of a married daughter complained about the "morality" of a physician's advice to the daughter and demanded that AMA rebuke the physician for his immorality. The daughter, however, made no complaint.

A United States senator, for the past several years, has questioned the ethical propriety of physicians owning pharmacies or optical shops or dispensing medicines or glasses to patients. In these hearings the measurement of right or wrong seemed to depend on the senator's own concepts. The quality of care extended to patients appeared to be a side issue.

These pseudo experts try to tell us that the medical profession is sick by pointing to the occasional rotten apple in the barrel of healthy fruit. The medical profession is not sick, not any more than society is sick. Physicians as human beings err just like any other human being. Physicians as physicians, however, err far less than those in any other profession, business or occupation.

The remarkable fact is overlooked when we talk about *medical* ethics and discipline. That remarkable fact is that in the practice of medicine there is a highly refined system of ethics. This system of ethics is observed. In the *practice* of medicine the physician as a physician is head and shoulders above his fellow man in his adherence to a standard of conduct which has as its goal "good" for the physician's fellow man.

Much is expected of the physician. As he gives, much more is demanded of him. We would not have it any other way. The practice of medicine could not have reached its present high state had our ideals been any less than they are.

It seems to me that when we discuss medical ethics and discipline we become defensive about human error and neglect to emphasize our successes in the area of professional ethics. It seems to me that, while we must apologize for the misconduct of the erring few, we have an affirmative duty to tell the public what our professional ethics have done for the public. The public needs more reassurance and less apology. The medical profes-

Dr. Smeltzer is a member of the AMA Judicial Council, and he made this presentation at the AMA Communications Institute, in Chicago, August 20, 1968.

sion deserves more commendation and less condemnation. We—all of us in this room—have an obligation, in my opinion, to understand the Principles of Medical Ethics of the American Medical Association for what they are. They are guides to conduct as the physician strives to accomplish his prime purpose of serving the common good and improving the health of mankind. They protect the patient, and insure that the patient will be treated as a human being who is entitled to the best that medicine can offer. They are the ideals by which medicine seeks to serve the public unselfishly for the public good.

The Principles do not inure to the personal or selfish interest of the physician. They neither insulate nor isolate the physician from responsibility to his patient.

Even casual analysis of the Principles of Medical Ethics shows that they are completely *patient oriented.* Each section is a guide to better patient care.

Chauncey Leake, America's most articulate authority on medical ethics, wrote forty years ago,

> "Medical ethics should be concerned with the ultimate consequences of the conduct of physicians toward their individual patients and toward society as a whole, and it should include a consideration of the will and motive behind this conduct."

He differentiated between ethics and etiquette, pointing out that one is idealistic and the other is hedonistic. He said,

> "The ethical basis for the professed attitude of medicine toward the sick and toward the public is idealistic, since it presumes that every professional act of the physician is motivated by rational and sincere concern for the ultimate welfare of society."

I urge a rereading of the Principles of Medical Ethics, especially with the thought in mind that the Principles represent medicine's promise of idealistic conduct by physicians toward patients who place their trust in physicians.

In medicine, demanding as it is, the number of temptations facing the physician are many; but the number who succumb to temptation is truly small. The opportunities for error or defection are much greater in medicine than in any other walk of life (except possibly the clergy) because of its code. The marvel is that physicians, who are, after all, human beings, succumb to temptation as infrequently as they do. The restraints imposed on the physician because he subscribes to and is bound by such an idealistic code are severe.

From the moment one enters the profession of medicine, he becomes imbued with a sense of responsibility toward his patient. *Primum non nocere*—First, do no harm—is drilled into the medical student. The interest, the welfare, the health of the patient comes before all else. As the student progresses through his studies and as he pursues his career, everything he learns accents and reinforces this mandate.

By the very nature of medical practice, physicians are the most disciplined of all human beings. Their practice demands that they follow, as the Oath of Hippocrates requires, a "method of treatment which, according to my ability and judgment, I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous."

When physicians transgress, they are corrected by themselves or their colleagues. The honorable physician is honorable, or ethical, because he continually corrects himself. He improves his techniques, he sharpens his talents, he "lives today as if he'd die tomorrow and learns today as if he'd live forever."

The physician who transgresses because of incompetence or ignorance is corrected by his colleagues. The county medical society ethics committee or the appropriate committee of the hospital's medical staff, by the exercise of peer judgment, corrects the erring physician. This is done not to punish the physician but truly to correct him so that no harm will come to the patient and so that physician is continually trained to give the care his colleagues demand that he give.

Nowhere is discipline more highly refined or more purposefully imposed than in medicine. To punish, to make one pay for his error, though necessary in general society, is almost barbarian. Intellect suggests that the first end of discipline or punishment is to correct wrongful conduct and to improve the individual so he can assume his rightful role and duties in relations with his fellow man.

To punish a physician without correcting him would be the height of stupidity. When an ethics committee censures a physician for overcharging a patient for a medical service, it is calling to his attention the error he has committed. More importantly, the action of the ethics committee warns both the aberrant physician and his colleagues that certain practices are wrong and will not be tolerated. The same is true of action by the medical records committee of the hospital, or its tissue or surgical audit committee. The message is implicit: "Take corrective action for the good of your patients." In medicine, disciplinary action and punishment do not mean the same thing. Disciplinary action means action taken to correct a deficiency in the character or conduct of a human being.

What does medicine do? Let me give a few examples. If a physician performs a caesarean section for selfish reasons in the hope of expediting delivery for his own convenience, he does not perform in accord with the ideals of the profession. He jeopardizes his patient's welfare. Although the statistical odds may be good, and although his patient may not suffer either immediate or irreparable damage, the conduct is medically inexcusable.

Though it may well be that the patient suffered no harm, or suffered but minimal harm, which is accepted by the patient as a natural incident to the

medical care received, in short, if the misconduct can be or is concealed, the people believe medicine is performing its services properly. But the fact that neither the patient nor the public knows improper conduct occurred does not excuse or justify the physician's action. The misconduct is judged on its own by the physician's peers, and it is not permitted to recur.

Does the patient know that his course of illness might have been shortened had his attending physician sought consultation? Probably not. Yet the physician's peers recognize this failure to call for consultation as being harmful to the patient. Peers demand that this harmful practice cease.

Does the patient know, or has he really any way to find out that the operation, with its ever attendant risks, wasn't necessary? Probably not. The surgeon's peers, however, know that lack of judgment was exercised in deciding upon the procedure. Corrective action is taken by the profession.

The physician fails to keep his records current. His patient doesn't know this. In some cases, undoubtedly, if the patient did learn of it, he would be totally unconcerned. The physician's colleagues, however, know of this bad practice, and they are rightly concerned. They take corrective action for the good of the public.

There are situations where the physician succumbs to the temptation to use drugs to relieve fatigue or exhaustion. The chances of the patient's knowing about this addiction and its dangers may be remote. Co-workers in the hospital soon learn of this evil and worry on patient's behalf. Corrective action in the public's behalf is taken quietly, without fanfare.

Medicine's Oath of Hippocrates antedates any like outline of ethical conduct for any business or professional group. The code of Thomas Percival of 1803, and the Principles of Medical Ethics of the American Medical Association continue this tradition.

The creation of medical societies with committees to review and evaluate professional conduct in the light of self-imposed standards designed for the patient's benefit is in keeping with the idealistic concept on which medicine's ethics are written.

The establishment of credentials, records, and review and audit committees within hospitals and the definition of their responsibilities resulted from the action of physicians cognizant of their ethical obligations.

Medical practice acts were drafted by physicians for the protection of the public. The Joint Commission on Accreditation of Hospitals and the Educational Council to Examine Foreign Medical Graduates are the results of medical leadership. The AAMC and our great medical schools are physician directed, controlled and inspired. Our splendid medical journals with their wide, useful, and current selection of medical, ethical and socio-economic articles are under the watchful guidance of editors for whose judgment and acumen we should be eternally thankful. Our system of medical education, physician inspired and directed, develops and nurtures ethical concepts and the idealism of medicine.

These and many other forces are all part of the science of medical ethics. Just as a carburetor or a camshaft, a hose or a tire, an engine or a body isn't an automobile, a medical school, a medical office, a hospital appointment, code, or set of guidelines or principles isn't the ethical conscience of a physician. An automobile is many parts. The physician's ethics are the sum total of the experiences he has had. In associations with fellow students and the faculty, in associations with colleagues and patients a climate has been created over the centuries in which the physician develops a conscience which immediately rejects conduct which is not for the patient's good.

If some people have erroneous ideas about medical ethics, and if some people believe medical ethics are not observed or enforced, we have failed in our efforts to communicate. Our job is to teach our critics what medical ethics are.

Let us stop being defensive. Let us point with pride to the systems medicine has to insure adherence to ethical principles. Let us show our patients and friends, at every opportunity, that "every professional act of the physician is motivated by rational and sincere concern for the ultimate welfare of society."

A Muscular Dystrophy Clinic Is Established in Omaha

A clinic for muscular dystrophy and allied diseases opened at the University of Nebraska Medical Center in September. It is being supported by the Muscular Dystrophy Associations of America, Inc. Dr. Richard Pellegrino is the director, Dr. Agapito Lorenzo is in charge of electromyography, and James D. Eisen, Ph.D., is in charge of genetic counseling.

The clinic will offer diagnostic services, genetic counseling and evaluation of therapy. It will also serve physicians as a clearing house for the latest information about muscular dystrophy, myotonia, myositis and the various spinal-muscular atrophies (e.g., Werding-Hoffman disease, Oppenheim's disease, amyotrophic lateral sclerosis, peroneal muscular atrophy, etc.). Referrals of patients having, or suspected of having, any of the above disorders will be possible only for the patients' own physicians.

The Omaha Chapter of the Muscular Dystrophy Associations of America can offer financial assistance in transporting patients to and from the clinic and in meeting their expenses while there. Further information in this regard should be requested from Mr. Dean Brown, 6058 Ames, Omaha (phone: 402-453-9998).

THE JOURNAL *Book Shelf*



Book Reviews

PHYSICAL STANDARDS IN WORLD WAR II, prepared and published under the direction of *Lt. Gen. Leonard D. Heaton,* Surgeon General, U. S. Army, and *Col. Robert S. Anderson,* MC, U.S.A., editor-in-chief. (Washington, D. C., Government Printing Office. $3.00.)

This one-inch-thick, 356-page volume is one of a large group prepared by the Historical Unit, U. S. Army Medical Service. It necessarily covers essential matters in the formation of all Armed Services physical standards, and for that reason it is perhaps the driest of all the volumes written concerning the Medical Department History in World War II.

During World War II some 10,420,000 military personnel served in the U. S. Army and Army Air Forces. To select this number, many more had to be examined, and rules for selection had to be established.

The general method of examination by the Selective Service Boards, followed by the Army physical examination immediately thereafter, is discussed, together with many of the pitfalls which were corrected as time went on.

Mobilization Regulations 1-9 are reprinted in the Appendices:

Appendix A. August 31, 1940

Appendix B. April 19, 1944

Appendix C. Reprints A R 40-105
May 29, 1923 Standards of Physical Examination for entrance into Regular Army, National Guard, or Organized Reserves.

Appendix D. Reprints A R 40-100
November 16, 1942 Standards of Miscellaneous Physical Examination

Appendix E. Reprints A R 40-100
December 3, 1942 Standards of Physical Examination for flying

C. Harlan Johnston, M.D.

NUTRITION AND INFECTION (Ciba Foundation Study Group No. 31), ed. by *G. E. W. Wolstenholme,* and *Maeve O'Connor* (Boston, Little, Brown and Company, 1967. $3.50).

This report of an international study group contains several papers of limited value to the practicing physician. Such discussions as "Placental Malaria and Fetal Growth Failure" and "Malnutrition and Infection in Europe" would be of interest to a researcher in nutrition. The references are adequate, and the discussions of the eight papers add to the value of this monograph as a reference work for the nutritionist.—*M. E. Alberts,* M.D.

Books Received

LAW AND CONTEMPORARY PROBLEMS, Volume 32, Number 4, Autumn, 1967, A Quarterly Published by Duke University School of Law. (Durham, North Carolina, Duke University School of Law, $3.00).

ELECTROCARDIOGRAPHIC NOTEBOOK, Third Edition, ed. by *M. Irene Ferrer,* M.D. (New York, Hoeber Medical Division, Harper & Row, 1968, $3.45).

HOW TO LIVE WITH HYPOGLYCEMIA by *Charles Weller,* M.D. and *Brian Richard Boylan.* (New York, Doubleday & Company, Inc., 1968, $4.50).

GROWTH OF THE NERVOUS SYSTEM, ed. by *G. E. W. Wolstenholme* and *Ruth Porter,* Ciba Foundation Symposium. (Boston, Little, Brown and Company, 1968, $12.00).

SYSTEMIC MYCOSES, ed. by *G. E. W. Wolstenholme* and *Ruth Porter,* Ciba Foundation Symposium. (Boston, Little, Brown and Company, 1968, $12.00).

MODERN TREATMENT, Vol. 5, No. 3, TREATMENT OF GALLBLADDER DISEASE, ed. by *James B. Carey, Jr.,* M.D., Ph.D., TREATMENT OF MENOPAUSAL PROBLEMS, ed. by *Eugene J. Cohen,* M.D. (New York, Harper & Row, 1968, $16.00 per year).

MODERN TREATMENT, Vol. 5, No. 2, TREATMENT OF PARKINSON'S DISEASE AND ALLIED DISORDERS, ed. by *Warren V. Huber,* M.D., TREATMENT OF ACQUIRED HEMORRHAGIC DISORDERS, ed. by *Oscar D. Ratnoff,* M.D. (New York, Harper & Row, 1968, $16.00 per year).

MODERN TREATMENT, Vol. 5, No. 4, TREATMENT OF FLUID AND ELECTROLYTE IMBALANCE, ed by *David D. Thompson,* M.D., CURRENT TREATMENT OF CLINICAL TETANUS by *Norman A. Christensen,* M.D., and *Deloran L. Thurber,* M.D. (New York, Harper & Row, 1968, $16.00 per year).

SPARE-PART SURGERY by *Donald Longmore,* F.R.C.S. (Garden City, New York, Doubleday & Company, 1968, $5.95).

THE CASE OF THE RHEUMATOID HAND, Second Edition, by *Adrian E. Flatt,* M.A., M.D., F.R.C.S., F.A.C.S. (St. Louis, C. V. Mosby Company, 1968, $14.00).

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INFORMATION FROM THE
IOWA HEART ASSOCIATION

Indications for Cardiac Pacing in Acute Myocardial Infarction

PHILIP SAMET, M.D.
Coral Gables, Florida

Congestive heart failure, shock and cardiac arrhythmias with rapid or slow ventricular rates are three complications of acute myocardial infarction resulting in increased mortality. The purpose of this report is to outline the role of cardiac pacing in the treatment of some of these abnormal rhythms.

Sinus bradycardia occurs in 11-14 per cent of patients with acute myocardial infarcation. First and second degree atrioventricular block have been observed in 12-23 per cent, and third degree or complete atrioventricular block in 2-8 per cent of patients with acute infarction. Complete heart block was associated with a mortality rate of 58-100 per cent prior to the era of pervenous cardiac pacing. The lesser degrees of atrioventricular block are potential warnings of complete heart block, and carry a high risk of ventricular standstill, ventricular tachycardia and ventricular fibrillation. Sinus bradycardia is probably associated also with ventricular asystole and the varied grades of atrioventricular block.

Since the initial report on the use of the pervenous temporary catheter electrode for the treatment of slow ventricular rates caused by complete heart block complicating acute myocardial infarction, a number of observers have employed catheter pacing under similar circumstances, in preference to drug therapy with isuprel or atropine. It must be stressed that spontaneous reversion to normal sinus rhythm occurs in the majority of patients with complete heart block complicating acute myocardial infarction. For this reason the recent development of the standby or demand pacing mode is of great practical importance. In this mode of pacing, an effective pacing stimulus results only when a QRS complex is absent for a preset, predetermined interval. For example, with the demand interval set at 60 beats/min., a pacer stimulus results if a QRS complex is absent for more than 1 second. With the demand interval set at 30, a stimulus results if the QRS complex is absent for more than two seconds. With the demand interval set at 120 per minute, a stimulus results if the QRS complex is absent for more than 0.5 sec. Competitive stimulation between the pacer stimuli and the patient's own QRS complex is thus avoided, reducing or abolishing the possibility of repetitive ventricular rhythms (ventricular tachycardia or fibrillation) if a pacer stimulus happens to fall on the apex of a T wave during the so-called vulnerable period. The latter may readily occur if fixed rate pacers are employed with transient complete heart block. The demand pacer impulse is generally set at 2-3 times the threshold level to minimize further the possibility of repetitive ventricular firing. Demand pacers are now readily available from a number of companies. External pacing plays little part today in the therapy of complete heart block with or without the complication of acute myocardial infarction.

Dr. Samet is a staff member of the Section of Cardiology in the Department of Internal Medicine at Mount Sinai Hospital of Greater Miami, Miami Beach, and the University of Miami School of Medicine, Coral Gables, Florida.

TECHNIQUE OF TEMPORARY CATHETER PASSAGE

The technique of temporary catheter passage deserves comment. A variety of veins may be employed to afford catheter passage—the cephalic or basilic veins, the subclavian, saphenous or external jugular veins. Since the last of those vessels is often utilized for permanent catheter passage, we prefer to use the median basilic veins for temporary pervenous pacing. Catheter displacement within the right ventricular chamber is not a significant problem when arm veins are employed. We usually do not employ the blind method of passing electrode catheters. An image amplifier fluoroscope located in the cardiac catheterization laboratory is used if the patient can be moved. If the patient cannot be moved, "blind" passage with a bipolar catheter has been attempted in the past, with the tip of the catheter used as an exploring intracavity lead in checking position. The latter approach, in experienced hands, is successful in 75 per cent of patients. A portable image amplifier, now available for bedside use, obviates the necessity for blind passage in patients who cannot be moved to the catheterization laboratory. We have utilized only bipolar catheters with the tip placed either in the right ventricular outflow tract or in the right ventricular apex. The thin platinum-tipped wires recently recommended by some cardiologists are not employed because of difficulty in blind passage and the danger of knot formation. On rare occasions, in emergency situations, a transthoracic wire may be utilized to permit rapid

ventricular capture by direct left ventricular needle puncture and passage of the pacing wire through the needle into the left ventricle.

PACING IN SECOND-DEGREE ATRIOVENTRICULAR BLOCK

The above discussion refers primarily to cardiac pacing in complete heart block. A few clinicians advocate initial therapy with atropine or isuprel for second-degree atrioventricular block, and if these fail, cardiac pacing is utilized. We utilize initial pacer therapy as do most cardiologists. To avoid competitive rhythm, demand standby pacing is again the treatment of choice. Fixed-rate pacers are especially contraindicated under these circumstances because of the danger of repetitive ventricular rhythms with ventricular fibrillation. On the other hand, first-degree atrioventricular block *per se* (without any other arrhythmia) is not treated by cardiac pacing, but is continuously, carefully monitored.

PACER THERAPY FOR SINUS BRADYCARDIA

Sinus bradycardia often requires pacer therapy. If the rate is between 50-60, atropine or isuprel therapy is carefully utilized in our institution, since these agents may slow the ventricular rate while increasing the atrial rate. If the rate falls below 50/minute, a bipolar catheter is passed into the right atrium by techniques similar to those described above, and set on atrial demand pacing modes at a rate of 60-70. Since atrioventricular conduction *per se* is normal under these circumstances, the ventricular rate is also 60-70. If any degree of atrioventricular block is present along with sinus bradycardia, the electrode-tip catheter is passed into the right ventricle for right ventricular demand pacing at a rate of 70-75. Nodal rhythm below rates of 60 is also treated by right ventricular demand pacing at rates of 70-75.

OVERDRIVING

The most recent development in catheter electrode pacing in acute myocardial infarction patients involves the concept of overdriving. Despite the availability of digitalis, quinidine, procainamide, xylocaine, propranolol, etc., some patients with episodic atrial and ventricular tachycardias continue to pose clinical problems. The cardiac pacing catheter has been utilized both on a temporary and a permanent basis to overdrive the heart (by either atrial or ventricular pacing) at rates greater than the sinus rate to prevent such ectopic rhythms. It must be emphasized that the use of the pacing catheter under these circumstances is *not* for patients with atrioventricular block but for patients with varied types of atrial and ventricular arrhythmias. The ultimate usefulness of this latter type of pacing remains to be established.

Short Courses Sponsored by the U. of Nebraska College of Medicine

The annual Cornhusker Conference for Surgeons will be held November 8 and 9 at Lincoln General Hospital, in Lincoln, Nebraska. The conference will concentrate on abdominal-wall hernias. Dr. L. Dwight Cherry, clinical assistant professor of surgery at the University of Nebraska College of Medicine, will be moderator. The guest speakers will include Dr. Chester McVay, of Yankton, South Dakota, and Dr. Clyde Kleiger, of Hastings, Nebraska. The course carries three hours of AAGP credit. The registration fee is $20.

Perinatal cardiac and respiratory emergencies will be the subject of the continuing education course at the Children's Hospital in Denver, Colorado, November 15 and 16. The course is sponsored by the University of Nebraska College of Medicine in cooperation with the Colorado-Wyoming Regional Medical Program. The course carries six hours of AAGP credit.

The Central Nervous System as a Mirror of Systemic Disease will be the topic for discussion at a continuing-education course in Omaha on November 21 and 22.

Coordinators will be Drs. Walter Friedlander, professor of neurology and chairman of the department, and F. Miles Skultety, professor of neurosurgery. The course registration is $40, and it carries 12 hours of AAGP credit.

Fast-Acting Alcohol Antagonist

A study of a fast-acting alcohol antagonist will be conducted at Pennsylvania State University. Gary D. Steinman, Ph.D., an assistant professor of biochemistry there, and the project director, said that researchers will study the ways in which cyanamide (Temposil) produces intolerance to alcoholic beverages. Drinking following the administration of Temposil produces flushing, rapid and shallow breathing, headache and dizziness. Similar reactions occur when one consumes alcohol after receiving disulfiram (Antabuse). However, an important difference between the two antagonists is that Antabuse requires four hours to act whereas Temposil works within the hour.

Dr. Steinman said that this difference is important in the treatment of alcoholism, since alcoholics can drink heavily during the four hours it takes Antabuse to react.

The project is being financed by the National Institute of Mental Health. The researchers plan to study the way Temposil works by tracing its metabolic pathway in rats. Radioactive cyanamide will be used. Understanding the intolerance may make both Antabuse and Temposil more useful, the investigators said.

STATE DEPARTMENT OF HEALTH

James F. Speers, M.D.

JAMES F. SPEERS, M.D., M.P.H., COMMISSIONER

Your Patients' Stake in Auto Safety*

Pediatricians are in a uniquely favorable position to advance parent and child understanding of a health problem that's been called the "neglected disease of our society."

On December 11, the PHILADELPHIA INQUIRER reported that a four-year-old girl was injured fatally Sunday afternoon when she was hurled from an automobile operated by her mother after a collision in Bridgeton. The mother and the other driver were injured seriously. . . . Bridgeton police said that the four-year-old Bonnie Wood and her mother, Mrs. Bertha H. Wood, 34, were found on the highway at the intersection of South Avenue and Garfield Street. The child was unconscious and she subsequently died.

This is typical of the tragedies that the news media report with unrelenting monotony.

In the United States, morbidity and mortality from the automobile have shown a 34 per cent increase in the last decade, reaching "epidemic" proportions. If there had been such an increase in deaths from an epidemic of one of the common communicable diseases, the public health resources of the nation would have been mobilized for a massive assault on the problem. This has occurred, successively, with pertussis, diphtheria, smallpox, tetanus, tuberculosis, polio, and now measles.

Of course, there will never be a Salk vaccine to protect us against automobile accidents, but surely there is more that the medical profession might be doing to control this "major public health problem."

Unfortunately, too many physicians (like most Americans) have grimly accepted the terrible price of automobile transportation in this country.

At long last, American medicine is beginning to think in terms of control of bodily injuries rather than control of the automobile accident itself (though the latter cannot and must not be ignored). Physicians for Automotive Safety is attacking the problem through recognition and application of the basic medical orientation that involves ameliorating the effects of disease where the disease itself cannot be prevented.

Such an approach to the control of the highway epidemic makes sense for two reasons: (1) Attempts to reduce the incidence of automobile accidents have essentially failed. (2) In the past 20 years there has been developed substantial medical-engineering evidence of ways and means to advance survivability in automobile accidents. Physicians for Automotive Safety believes that all Americans need to understand that death by the automobile is not necessarily an unavoidable, inevitable tragic result of human error.

In every automobile accident there are two collisions.

The first involves the impact of the vehicle itself with an obstructing object or another vehicle.

The second occurs (a fraction of a second later) when the occupants of the car, continuing in the direction of travel, strike some object and come to a stop.

Substantial research has determined specific patterns of second-collision injury. These indicate means by which deceleration and other forces can be controlled and the severity of bodily injury lessened. Research at the University of Michigan under Drs. Gikas and Huelke, indicates that three-quarters of automobile accident fatalities can be attributed to three major causes: ejection from the vehicle (27 per cent); collapse of the car structure (34 per cent); and impact with hazardous interiors (13 per cent).

The risk of fatal injury is increased nearly five times when an occupant is thrown from the car. Children who become "missiles" in the second collision endanger both themselves and other occupants.

It should be noted that collapse of the surrounding car structure only occurs 13 per cent of the time, not frequently enough to contradict the basic argument for the use of restraint systems—that the safest outcome of an automobile accident involves the occupant's remaining secure in his original seated position.

* Excerpts are from an article by Seymour Charles, M.D., in the March, 1968, issue of PHYSICIAN'S MANAGEMENT. The author, a pediatrician, is president of Physicians for Automotive Safety, a national group comprising 400 doctors concerned with this particular area of public health.

To date, promotion of restraint systems for crash protection has been almost exclusively directed toward seat belts, which are the most effective single device available to lessen the forces of deceleration. Properly designed, installed and secured, seat belts will (1) minimize injurious impact with the car interior, (2) maintain the driver in his proper seated position, preventing loss of control of the car, (3) keep occupants in their proper seated positions and (4) prevent ejection of occupants from the vehicle, injury-producing contact with exterior objects, and crushing after ejection by one's own or another vehicle.

But how about children? It is safe to say that seat belts were not developed with infants and small children in mind. In fact, development of better crash protection paid scant attention to youngsters, despite the fact that they least of all can make decisions for themselves.

The work of Garrett and Moore at Cornell showed that the safest place for children is in the rear seat. This finding produced the erroneous impression that children are not so seriously injured by automobile accidents because they customarily sit in the rear seat. But there is no such rule, and in fact most children vie for the front seat. In addition, parents find it convenient to place them in the front seat where they can be more easily observed.

A myth has grown to the effect that most children injured by automobiles are pedestrians. National statistics show that only one-half of child highway fatalities are pedestrians or bicyclists; one-half are car occupants.

A lack of effective child-restraint systems is the most obvious evidence of the neglect of the small passengers. True, the retail market has been flooded by an array of inexpensive and flimsy contraptions to hold the small child in the automobile. Even the light-weight plastic papoose platters are advertised as safety seats for infants.

The deplorable fact is that the manufacturers are as helpless as the consumer because there are no safety standards for them to refer to and no reliable means of testing what they produce for the small child. Unfortunately, the seats provided are often themselves injury-causing, since they attach loosely over the back of the seat and have a simulated steering-wheel in front.

What are the prospects for the future of child safety? In October of last year, the newly established National Highway Safety Agency requested proposals for federal standards for child-restraint systems to be issued in 1969. These are to include car seats, beds, and bassinets, and will preclude the marketing of inferior products. But 1969 is too far distant. What about family transportation now? We have a clear responsibility to promote and teach available means of protection for small passengers.

Let us make one point very clear at the outset. *No child of any age*—not even the newborn in his first ride home from the hospital—should be simply hand held. Even if a mother could effectively anticipate an impending collision, she is not strong enough to prevent the forces of deceleration from wrenching the child from her arms. Small infants should ride in a bassinet that is positioned longitudinally (front to back) in the rear seat. The bassinet should be the sturdiest available. It should have firm, cushioned sidewalls. Its front and rear legs should be firmly anchored to the car by the front and rear center seat belts.

Small children (up to 50 pounds) should be restrained in a car seat or harness device. Where the car seat is used, both the child and the seat should be anchored by a seat belt. The importance of anchoring the seat with a seat belt cannot be exaggerated. Flimsy, over-the-seat-back car seats have no provision for anchorage and in a collision would go flying with the child.

Harnesses that enclose both the upper torso and the pelvis are valuable restraints for toddlers, who may adapt less well in the confining child car seat. Harnesses must be anchored to the car structure by means of a seat-belt attachment. One of the best child harnesses available at this writing is made by Rose Manufacturing Company, of Denver, and is marketed by Sears. But lack of safety education has had its effect. For example, most dealers did not stock and many did not even care to order for the consumer the first child seat put out by Ford. Only ignorance could have fostered this neglect.

With their 1968 models, both Ford and General Motors announced child car seats, which we may presume have received crash testing. At first inspection, these seats seem to offer substantially more protection to the small child passenger. Both seats sell for under $20.

Older children should be protected in the same manner as adult passengers. Today all new cars are required to have six seat belts as standard equipment. The center front-seat passenger and the three rear-seat passengers (older child, adolescent, or adult) should be restrained by the simple lap belts that are standard in these positions. Upper-torso restraints (commonly called shoulder harnesses) are now standard for the two front seat outside positions.

Prior to the final decision by the National Highway Safety Bureau to require this standard, there was much controversy and confusion about these belts. Most Americans, including physicians, do not understand the additional crash protection offered by the shoulder harness-lap belt combination, as is evidenced by the fact that less than 1 percent of American drivers now use the upper-torso restraint system.

For the front seat passenger, the simple lap belt will not prevent jackknifing into the windshield and instrument panel or prevent at least partial ejection from the vehicle. Substantial research indicates that the upper-torso restraint in

combination with a lap belt will increase survivability from 40 per cent to more than 50 per cent.

Harold A. Fenner, M.D. of Hobbs, New Mexico, chairman of the AMA Committee on Medical Aspects of Automotive Safety has said: "Parents are unnecessarily risking the lives of their children."

Physicians for Automotive Safety is especially active in the development of means to educate and involve physicians in this new field of "preventive medicine." Those who would like to join in our endeavor should write to Arnold Constad, M.D., secretary, Physicians for Automotive Safety, 527 Morris Avenue, Springfield, New Jersey.

Morbidity Report for Month of August, 1968

Diseases	Aug. 1968	July 1968	Aug. 1967	Most Cases Reported From These Counties
Diphtheria	0	0	1	
Scarlet fever	150	113	221	For the state
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	2	11	3	Dickinson, Polk
Whooping cough	3	2	5	Polk
Brucellosis	1	10	2	Crawford
Chickenpox	23	55	15	Des Moines, Dubuque, Jasper
Meningococcal meningitis	0	0	2	
Mumps	62	101	91	For the state
Poliomyelitis	0	0	0	
Infectious hepatitis	17	28	16	For the state
Rabies in animals	11	9	15	For the state
Malaria	0	1	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	11	11	26	For the state
Syphilis	59	35	76	For the state
Gonorrhea	421	291	226	For the state
Histoplasmosis	1	1	1	Polk
Food intoxication	0	30	0	
Meningitis (type unspec.)	1	7	0	Des Moines
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	2	
Salmonellosis	3	9	20	Scott, Wapello, Webster
Tetanus	0	1	0	
Chancroid	0	0	0	
Encephalitis (type unspec.)	0	0	2	
H. influenzal meningitis	0	0	1	
Amebiasis	0	0	0	
Shigellosis	5	10	7	Scott
Influenza	0	0	0	

Carbon Tetrachloride Poisonings*

Carbon tetrachloride was first prepared in 1849 and used initially as an anesthetic by Simpson, the discoverer of chloroform anesthesia. However, that use for the substance was soon discarded because of its toxicity. In 1921, carbon tetrachloride was reintroduced into medicine as an oral medication for the eradication of hookworm. However it has now been largely replaced for this purpose by newer, less toxic anthelmintics. Because of its excellent solvent properties, nonflammability, and low cost, it was one of the most widely used of the chlorinated hydrocarbon solvents. Presently it is used as a chemical intermediate and solvent in the chemical industry. Over half of the carbon tetrachloride produced is used in the manufacture of other chemicals such as the Freon propellants and refrigerants. In addition, it has been employed in the fumigation of grain and manufacture of rubber, in fire extinguishers, insecticide sprays, and as a nonflammable solvent in household products such as floor waxes and cleaning solvents. In recent years there has been an effort on the part of many manufacturers to replace carbon tetrachloride in their products as well as in their industrial uses with other less hazardous substitutes.

Carbon tetrachloride is readily absorbed through the lungs and the gastrointestinal tract. Some percutaneous absorption is possible, although this is not thought to be an important factor in systemic intoxication. Because of its high degree of lipid solubility, carbon tetrachloride is readily absorbed and is concentrated in the body fat, liver, and bone marrow. Excretion is slow. Tests with monkeys have shown that carbon tetrachloride (radioactively labeled) which they had absorbed from inhalation was excreted over a 2½ month period. About half was eliminated unchanged in the expired air. The remainder was exhaled as carbon dioxide and excreted as urea and an unidentified metabolite in the urine, and in the feces. Due to this slow excretion, chronic intoxications do occur.

Acute intoxication by inhalation produces irritation of mucous membranes, nausea, vomiting, headache, dizziness. These symptoms frequently disappear within a few hours after cessation of exposure. Larger amounts produce stupor, convulsions, coma, and central nervous system depression.

One of the major hazards from carbon tetrachloride intoxication is that of sudden death. This may occur from ventricular fibrillation, or from depression of the vital centers in the medulla causing respiratory failure. It should be anticipated that hepatic and renal failure may occur within 48 to 72 hours following exposure. Oliguria with red cells and albumin present may last a few days to a week or more, followed in severe cases by anuria. This may lead to hypertension, acidosis, and uremia. Hepatic necrosis may occur,

* From the July-August, 1968, issue of BULLETIN OF THE NATIONAL CLEARING HOUSE FOR POISON CONTROL CENTERS.

producing jaundice, and if severe, hepatic coma.

A man who died one week after extinguishing a fire in a closed room with a carbon tetrachloride fire extinguisher exhibited hemorrhages in the pons and middle cerebella peduncle and extracellular perivascular edema of the brain as well as renal tubular lesions and fatty liver.

Treatment of carbon tetrachloride intoxication includes removing the patient from exposure and emptying the stomach if ingested. Oxygen and artificial respiration are administered, but epinephrine and other sympathomimetics are *not* given for hypotension, as they may induce fatal ventricular fibrillation. This is due to carbon tetrachloride's having "sensitized" the myocardium causing it to react excessively to these drugs as well as to endogenous epinephrine.

Treatment of acute hepatic and renal insufficiencies caused by carbon tetrachloride presents a challenging problem. Although hepatic insufficiency, evidenced by varying degrees of jaundice, is a prominent feature, renal failure is the most frequent cause of death in non-acute poisoning. Therefore, although the symptoms may indicate liver insufficiency, renal function must be carefully observed, and oliguria or anuria anticipated. Fluid and electrolyte balance must be carefully maintained during renal insufficiency, to avoid hyperpotassemia and pulmonary edema. Because profound diuresis frequently accompanies renal recovery, electrolyte replacement during this phase must also be accomplished, as indicated. Treatment of the liver damage is primarily supportive, with high-protein, high-carbohydrate diets, provided that renal failure is not present. Extracorporeal hemodialysis is indicated if anuria occurs.

There is a higher probability of significant kidney damage following an acute dose in man than would be indicated by observation of laboratory animals. In animals, protection against hepatic damage and a reduction of mortality from carbon tetrachloride have been achieved by pretreatment with antioxidants such as alpha-tocopherol. Hepatic necrosis in rats was greatly diminished by treatment with promethazine, a phenothiazine derivative, when given as late as six hours after exposure to carbon tetrachloride. No evidence of the value of such treatment in man has yet been presented.

Household containers of products containing carbon tetrachloride now require the words "Danger," and "Poison," a skull and crossbones and the statement "May be fatal if inhaled or swallowed." Nevertheless misuse does occur, especially when it is used in inadequately ventilated rooms.

In a five-year period, 1963 through 1967, the National Clearinghouse for Poison Control Centers received 85 individual case reports of ingestion or inhalation of carbon tetrachloride from the various poison control centers. Of those, 33 were symptomatic at the time of the telephone inquiry or treatment. Those cases do not reflect the total nationwide incidence, since many poisoning cases are treated by private physicians and hospitals that do not report to the Clearinghouse.

The U. S. Food and Drug Administration has proposed a regulation to prohibit the interstate shipment of all products containing carbon tetrachloride which are intended for household use. This regulation, which was to have become effective this July, has been stayed, pending a hearing. Products containing carbon tetrachloride which are intended for industrial, scientific, or other non-household use are exempt from this proposed regulation.

The Food and Drug Administration said its action was based on findings that the use or presence of carbon tetrachloride in or around the home pose a hazard to public health. Industrial uses of carbon tetrachloride have already been voluntarily supplanted to a large extent by other less hazardous solvents such as 1,1,1-trichloroethane, trichloroethylene, and perchlorethylene. Because other solvents of equal effectiveness and considerably less toxicity are readily available, the Food and Drug Administration has concluded that the use of carbon tetrachloride in household products is unwarranted.

Conference on Stroke Management

Typical of the continuing education projects that will be fostered by the Iowa Regional Medical Program is the Conference on Strokes that is scheduled for October 3-4-5, at University Hospitals, Iowa City.

An introduction and description of the IRMP's current undertakings and future plans will be presented at each of two sections of the conference by Willard Krehl, M.D., coordinator of the regional program.

Comprehensive stroke management is regarded by the IRMP as one of its major, educational objectives. Scott Davenport, M.D., has been named coordinator of a three-year educational program in that activity. Dr. Davenport, an associate in neurology at the U. of I. College of Medicine, was responsible for planning the stroke conference.

The first section of the conference, on October 3 will be presented for the benefit of professional nurses and other health facility personnel. It will dwell on the interdisciplinary-team approach to the care of the stroke patient.

New diagnostic and therapeutic concepts pertaining to stroke management will be presented on October 4 and 5 primarily for physicians. Included on the guest faculty are William Fields, M.D., professor of neurology at the University of Texas Southwestern Medical School, Dallas, and Robert J. Joynt, M.D., chief of neurology, University of Rochester and Strong Memorial Hospital, Rochester, N. Y.

Cooperating with the IRMP in sponsoring the Conference on Strokes are the U. of I. Department of Neurology, and College of Nursing.

THE DOCTOR'S BUSINESS



Are Your Personal Financial Affairs in Order?

LARRY E. LEAVERTON
Des Moines

One might think that the physician with a well managed and efficient medical practice would have his personal affairs in order. In some instances this is true, but there are too many cases where a physician could meet with an accident or sudden illness and burden his family and advisors with time and expenses that he could have minimized by doing some advance planning.

Most doctors are laying careful plans for retirement, but how many will actually retire? No less important than a retirement scheme is an orderly plan to provide for the handling of a doctor's affairs in the event of his death.

Many problems in settling an estate can be eliminated or minimized through careful planning by the physician and his attorney, trust officer, insurance agent, and other advisors.

Why is proper estate planning necessary?

(1) To insure the maximum and orderly accomplishment of objectives with regard to distribution of the assets in the estate, and to assure maximum utility of the estate through provision for proper management.

(2) To insure minimum erosion of the estate through taxation.

Both of these objectives must be coordinated if one is to have a completely efficient and workable estate plan.

Many a physician is not aware of the size of his potential estate. For an attorney and a trust officer to do an adequate job they must have full knowledge of the doctor's complete financial position. An up-to-date inventory of all of his assets and liabilities is necessary. Most physicians have such figures covering their office practice, but little or no data regarding the costs, purchase dates, current values, etc. of their personal assets such as their residence, securities, miscellaneous properties, and bank accounts. They may know, but it is doubtful that anyone else would know in the event of their death? Also important are complete and up-to-date summaries of their life insurance programs, tax files, military service records, deeds to properties, and legal documents such as divorce decrees.

When making a determination of the prospective size of an estate, it is important that the current values of the assets be used, rather than costs, and that all life insurance except that owned by others be included. Don't count on a large amount from the sale of the medical practice. Most medical practices are not readily salable with today's shortage of doctors. The major portion of the accounts receivable from patients should be collectible. If a partnership or group practice is involved, the partnership agreement should specify exactly what the withdrawing partner's estate is to receive in the event of his death.

Almost basic to the physician's personal financial plan is his will. However it is frequently neglected. Problems can arise from the failure to make a will or to update an existing one. The doctor's will must be periodically examined by his attorney to see whether it is current in regard to his desires, his current family situation, and recent tax legislation. The physician's wishes regarding bequests may have changed. It is important that his wife should have a current will coordinated with his own. Both should provide for the possibility that their deaths may be simultaneous.

Matters such as how the doctor wishes to have his practice disposed of, the values of some of his assets, his wishes regarding disposition of records, termination pay for his office personnel, the locations of inventories and records, the names of advisors, and other instructions can take the form of a testamentary letter. Although not legally binding, it could be very helpful to his heirs and the executor of his estate.

If you live to be 100, the planning you have done will not have been entirely wasted. The efforts expended will have given you peace of mind in the interval. Furthermore, an appraisal of your current financial position may reveal how little you have actually provided either for the protection for your family in the event of your untimely death, or for your eventual retirement.

Mr. Leaverton has been associated with Professional Management Midwest since 1949. He is a partner in the firm, and is director of its Research and Development Department.

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Plan now to join your colleagues in Miami Beach. Be sure to look for the complete scientific program, plus forms for advance registration and hotel accommodations in the October 21st issue of JAMA.

Iowa Association of Medical Assistants

Insurance—Bane or Blessing?

Today more than in any other period of medical assisting, some may think that the mountains of insurance forms spoil or ruin the day for the assistant. That is a correct assessment, *unless* she meets the challenge by being prepared. From another point of view, insurance is indeed a blessing for the aged and sick!

Insurance is not a modern invention. Even in ancient times the members of a community combined their risks so that one individual's loss or misfortune would be borne by the group.

Health insurance, however, is relatively new. Insurance companies offered regular medical-expense protection for the first time in 1944. By the end of that year only 200,000 people in all of the United States were covered by such insurance. Today, regular medical insurance which pays for house and office calls and other non-surgical care by doctors is held by over 50,000,000 people. Thus it accounts for the large stacks of forms that must be processed. In many offices, today, one or more women are employed full-time to complete health-insurance claims.

More than 900 insurance companies issue health insurance policies in the United States, and many of them are licensed to operate in all 50 states and the District of Columbia.

In a recent survey of the extent of voluntary health insurance coverage in the United States, it was found that at the start of 1964 hospital insurance covered more than 145,329,000 persons, or four out of every five U. S. citizens. In the previous year nearly eight billion dollars had been paid out, or an average of almost $54.00 for each policyholder. Think what the figures will be some five years hence, or even what they will be year after next, in 1970!

There have been great increases in recent years in three other types of insurance: surgical insurance, with more than 90,000,000 persons now covered; major-medical insurance, now held by more than 50,000,000 people in comparison with just 100,000 covered in 1951, the year major-medical started; and loss-of-income insurance, with over 25,000,000 persons covered.

Major-medical insurance was designed to protect the policyholder against hospital, surgical and medical expenses in connection with a long illness or extensive surgery. The policy usually contains a "deductible" clause requiring the insured to pay all small medical and hospital expenses himself, unless he has an additional policy that covers some of them, or the clause may require the insured to pay the first x number of dollars of the bill and commit the insurance company to take care of the remainder up to a specified amount.

Why should the medical assistant familiarize herself with these various sorts of health-insurance policies and their respective provisions? Well, by rereading the above figures she will know that she must prepare her share of claim forms. Moreover, when many patients are asked how they plan to pay their doctor's bill, they reply: "My insurance will take care of it," or "Medicare will cover it." Very few patients know exactly what their policies cover, whether they be Medicare or private insurance plans, and too often patients assume that their protection is much more extensive than it actually is. Either they haven't taken the trouble to read the exceptions and limitations in their policies, or they haven't been capable of understanding the legal and medical language used in those policies. Consequently, someone must break the bad news to them, and the task frequently falls upon the medical assistant.

The medical assistant should not be expected to know all of the details of the thousands of different policies, but she should be familiar with the usual provisions of the major types that I have mentioned, and to have an acquaintance with the provisions of the policies that most people in her particular area carry.

To be prepared, she should:

A. Make up a file containing specimen copies of various insurance forms.

B. Study the forms and prepare sample reviews of covered and non-covered items in make-believe cases for her employer to review and correct.

C. Secure all necessary data from the patient's identification card, and post the figures on the appropriate ledger card along with the patient's medical history.

D. Request guidelines, whenever necessary, from the various insurance companies.

E. Keep a small notebook at hand, in which to enter the names of patients for whom insurance claims must be filed.

F. Place a red checkmark and the date of filing

opposite the patient's name, in that notebook, at the time she completes the claim form.

G. Make an electrostatic copy of the claim form, and attach it to the patient's file card.

H. Stamp a message on the patient's statement, to the effect that his insurance claim has been filed.

I. Complete a sufficient number of insurance claims each day so that a "bottleneck" won't develop in the "insurance department."

Here are some general rules regarding insurance forms:

1. Always make sure you have an extra copy for the office files.

2. Be sure that the patient has supplied all of the information that is required of him.

3. If the policy permits full payment to the physician, provided that the patient authorizes it, make sure the patient signs the requisite authorization.

4. Don't skip any questions. If some are inapplicable, draw a line through the space provided for the answer, showing that the question has not been overlooked.

5. If necessary, check with the doctor to get information which is not otherwise available.

6. Be absolutely certain that the correct charge for medical service is entered on the form.

7. Be sure that the wording and the spelling of the diagnosis are correct.

8. Before mailing, give the form to the doctor for his approval and signature.

Workmen's Compensation Insurance Forms. As with other insurance claims, the following information should be secured from the patient who has been injured at his job:

A. Employer's name and address

B. Insurance company's name and address

C. Date and place of accident

D. A brief description of the circumstances, the patient's age, the nature of the injuries sustained, the medications administered prior to his arrival at the doctor's office, and/or the name of the hospital where he was treated before he came to the doctor's office.

A word of caution! . . . The law forbids a doctor or anyone in his employ to release information regarding a patient's illness to anyone, including insurance companies, without first obtaining written authorization from the patient. Most insurance forms contain a statement to be signed by the patient authorizing the release of information to the insurance company, and the medical assistant must be certain that the patient has signed that release before she mails it to the company.

Working on insurance forms is a part of your job. Remember, the more you think of your work as being valuable to someone else, the more interesting it will become and the more enthusiastic you will be about doing it. You have health insurance, and so do I; it is a blessing!

—MARIAN LITTLE

Radio Device for Monitoring Tracheostomy Tubes

A tiny sensor and radio transmitter which was developed for space research promises to eliminate the thousands of hours and heavy costs of continuous watches by nurses that are now required for infants and comatose adults suffering from windpipe obstructions. The device also should save lives where such 24-hour surveillance breaks down, as it sometimes has.

The system was developed by the Children's Hospital Medical Center of Northern California, Oakland, and NASA's Ames Research Center, Mountain View, California, which invented the device. The radio alarm has been used on an experimental basis with a four-month-old infant at the hospital.

Because clogging with mucous or other material has been a frequent problem with tracheostomy tubes, a constant watch of children and comatose adults is needed. If the tube becomes obstructed and the watch fails to detect the obstruction and take immediate corrective action, death by suffocation can occur rather quickly.

To prevent this, doctors and scientists at the Bruce Lyon Memorial Research Laboratory of Children's Hospital Medical Center have joined researchers at the National Aeronautics and Space Administration's Ames Research Center to devise an automatic monitoring system. Using components already developed and tested for space research, they designed a system which detects clogging of the breathing tube, and radios an alarm to a nurse.

The heart of the system, the tiny transmitter, was developed by NASA in mid-1967 for such functions as radioing electrocardiograms from subjects being tested on a centrifuge that simulated re-entry from an Earth orbit.

Two months ago the hospital tried a prototype of the radio-breathing tube system. It was fastened carefully to the neck of a puppy which had undergone a tracheostomy. During several hours of operation, the tube in the puppy's windpipe became clogged on many occasions. The radio gave the alarm, and doctors quickly cleared the obstruction. No difficulties were encountered at any time. Human tests began with a four-month-old girl recovering from delicate heart surgery performed at the hospital. Following her operation, her doctors inserted a tracheostomy tube to help overcome her breathing difficulties.

To make the system, the NASA researchers took an existing integrated-circuit FM transmitter about the size of a sugar cube, and a thermistor (temperature sensor) of match-head size. When combined with a battery the size of an aspirin tablet, the total system weighs about an ounce, and is about half the size of a small match box. The thermistor extends slightly into the breathing tube and sends a signal to the transmitter, which shifts up and down in voltage as temperature

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changes regularly with each intake of cool air and exhalation of warm air. When the transmitter broadcasts a high frequency signal, it indicates the cool "intake" cycle, and a lower frequency shows the warm "outflow" of air.

An FM aerial in the patient's room picks up the signals and sends them by wire to an FM receiver at the nurses' station. The radio reproduces the breathed-air temperature signals as a continuous warbling tone, high to low and back again. Engineers John Dimeff, chief of the instrumentation division, and Jack M. Pope, who designed the system, also devised a solid-state timer connected to the FM receiver, which throws a switch when it fails for 10 seconds to receive the regular warble of normal breathing. The switch is thrown by either a decline in volume of warble (reduced breathing) or complete cut off (no breathing). The switch turns on a loud buzzer in the nurses' station, easily heard 50 feet away. The nurse rushes to the patient and clears the breathing tube. The timer also sets off a different alarm if there is a power failure.

Psychosomatic Medicine

The American College of Physicians will present a short course entitled "Stress and Disease: Relationship of Psychological and Social Forces to Pathogenic Mechanisms," November 18-22, at the University of Oklahoma Medical Center, Oklahoma City. The fee for A.C.P. members is $60, and the fee for non-members is $100. Maximum registration will be 45. Send all registrations to Edward C. Rosenow, Jr., M.D., executive director, 4200 Pine Street, Philadelphia 19104.

The course is designed to acquaint the internist with recent developments in psychosomatic medicine not readily available in textbooks. Special emphasis will be placed on individualized instruction in interviewing. Methods of gathering pertinent psychosocial information from patients and utilizing it in diagnosis and treatment will be illustrated and discussed. Each morning there will be lectures and discussions of data concerning the relation between life situations and emotions and various systemic diseases—cardiovascular, gastroenterologic, pulmonary, endocrine, neurologic, hematologic and cutaneous. Each afternoon will be devoted to sessions with small supervised groups for experience in interviewing techniques, with selected patients, making use of closed-circuit television, filmed interviews and one-way glass screens. An evaluation of the effectiveness of this course is built into the program, and a follow-up report will be mailed to all participants.

In addition to members of the faculty at the University of Oklahoma Medical School, the instructors will include Morton D. Bogdonoff, M.D., professor of medicine at Duke; David T. Graham, M.D., professor of medicine at the University of Wisconsin; Thomas H. Holmes, M.D., professor of psychiatry at the University of Washington, Seattle; Lennart Levi, M.D., director of the Laboratory of Clinical Stress Research at Karolinski Sjukhuset, Stockholm; and James L. Mathis, M.D., associate professor of psychiatry at Rutgers University.

Plan to Attend the

22nd AMA Clinical Convention

in Miami Beach

December 1-4, 1968

Physicians Are Asked to Help Gather Auto Accident Data

Teams of physicians and police traffic officers have been proposed as a means of collecting vitally needed scientific data from auto accidents. H. A. Fenner, Jr., M.D., of Hobbs, New Mexico, chairman of the American Medical Association's Committee on the Medical Aspects of Automotive Safety, has pointed out that every traffic accident presents an opportunity to discover clues to prevention. "Most accident reports at the present," Dr. Fenner says, "are related to law enforcement rather than to research-oriented data collection. If we had a corps of knowledgeable, trained, and qualified physicians and police officers to provide accurate, scientific reports on a large number of accidents, automotive engineers would have the necessary data to translate into safer motor vehicles and highways."

Dr. Fenner notes that many of the safety devices on present-day automobiles and highways resulted from traffic accident research.

According to Dr. Fenner, the AMA Committee, along with the American Association for Automotive Medicine, is studying the possibility of working with one or more universities in the establishment of intensive short-courses in accident investigation. Preliminary discussions have indicated that such a course would be of three days' duration and would be limited to 200 teams, each consisting of a physician and a member of a police traffic department.

Dr. Fenner said the important need at the moment is to determine whether enough physicians are interested in participating in such an effort. Each physician who is interested is asked to send his name, address, age, medical college, and field of practice to the Committee on Medical Aspects of Automotive Safety, at the AMA, 535 North Dearborn, Chicago, Illinois 60610.

Woman's Auxiliary News

Rostrum Ramblings

Summer is long since over, the sunburn should be well peeled off, and now I guess it is time to take a deep breath and go gung-ho into the new Auxiliary season. There is so much to be done, and time always seems so fleeting. Let's start right now on our programs of community service, interesting events at our meetings, and the social functions that bring us pleasantly together. Let's make our "Membership Count," and make our communities aware of the Medical Auxiliary!

There must always emerge, too, the grubby matter of money. To function, we must have some of it, so let's get busy on dues collection and get our funds in on time.

Next month is an important one for America. Our right to express our political opinions is a precious and solemn duty. Whatever your political convictions use your time, effort and money in support of those candidates who best express what you feel.

Finally, saddle up old Paint or Baldy or whatever, and ride in to the Fall Roundup on October 22. The corral will be at the spread of the Iowa Medical Society, in West Des Moines, and the branding will go on from 10 to 4, with time out for beans and side meat from the chuck wagon. County officers, committee chairman, members, and members-at-large are all invited. Let's raise a big cloud of dust all over Iowa on our way in.

—Lenor Bishop (Mrs. James F.)

P. S. I would like to visit you whether you are a member-at-large or a county group. I am a little shy, though, and would like to be invited.

Annual Fall Round-Up

Date:	October 22, 1968
Time:	10:00 a.m. to 4:00 p.m.
Subject:	What Makes the Wheels Go Round
Corral:	IMS Building, 1001 Grand Avenue, West Des Moines
Noon:	Complimentary Chuckwagon Buffet
Program:	Specialists in the field of TV, radio, and juvenile problems to be solved in this psychodelic age.

Ranch Hands (actually state board members) are planning on wearing western clothes, cotton blouses and skirts, red kerchiefs around their necks, and low heeled shoes or boots. Join us in the informal wear, if you like, and we will all have a new atmosphere in which to learn and socialize. In case you haven't guessed, this will take the place of our annual workshop. Do come, bring your questions *and* suggestions to your state chairmen who will all be there with displays *and* the answers! We would like for all counties to have a car (or should we say wagon?) of officers and members and as many members-at-large as the stars in the sky.

Around the Hawkeye State

Polk County

In August, ten of the Woman's Auxiliary members worked in the Iowa Medical Society "Hall of Health" exhibit at the Iowa State Fair. Two very interesting exhibits were shown this year, "The Transparent Woman" and "Life Begins."

The Woman's Auxiliary to the Polk County Medical Society has Meal Service from Iowa Methodist Hospital rolling along, largely as the result of the great effort of our chairman, Mrs. Alfred N. Smith, and her appointed captains of the day, Mondays through Fridays, Mrs. Arthur H. Downing, Mrs. Don O. Newland, Mrs. John G. Thomsen, Mrs. James A. Skultety and Mrs. Dwight C. Wirtz. Each captain has a list of Auxiliary members on whom she may call to deliver the meals.

Mrs. Meredith R. Saunders is our Polk County Auxiliary representative on the Family Life Education Committee of the County-Wide Task Force for the Venereal Disease Control Program.

Our mailing committee, under the chairmanship of Mrs. Edward R. Posner, Jr., sent out invitations for the Annual Fall Party of the Polk County Medical Society and the Woman's Auxiliary, which was held on September 18 at the Des Moines Golf and Country Club. Mrs. Robert J. Foley, chairman, and other members of the Social Committee welcomed the guests.

Five Woman's Auxiliary members attended a meeting held at Camp Sunnyside on August 15, for a briefing on the Homebound Handcraft Sale to be held October 7 through 12, in the fifth floor foyer at Younkers downtown Des Moines store. Any member who cares to lend a helping

hand, please contact Mrs. Robert J. Reed or Mrs. James W. Ryan for an assignment.

Disaster-Preparedness and Safety

Now that children are back in school, you may want to emphasize safety programs. There's such a wealth of material, it's difficult to suggest just what would be most important for your community.

Goodyear Tire and Rubber Company, Akron, Ohio, puts out a bicycle blue book which reminds bike riders of good safety practices. Each year in fatal accidents involving bicycles, about four out of five of the bike riders are in the 5-15-year age bracket. Approximately 2,500 cyclists suffer disabling injuries. The National Safety Council feels that it is mandatory for bicycle riders to learn the traffic rules, just as automobile drivers learn them before taking the driver's license test.

The American Automobile Association feels that tricycle riders must be taught safety rules, too. That organization's Foundation for Traffic Safety, 1712 G Street Northwest, Washington, D. C., produces top-notch films on traffic and safety education.

The Safety Department of the Western Electric Company's Oklahoma City works puts out a coloring book that teaches many safety rules to small children.

The Allstate Insurance Company, a subsidiary of Sears, Roebuck and Company, publishes a pamphlet on "night's deceiving eyes," which emphasizes the dangers of night driving. There is an Allstate Insurance desk in every Sears, Roebuck retail store.

Driving is a much bigger job than the mere operation of a car. If your high school has no driver-training plan, you could be doing a real service by urging the establishment of one.

The Oklahoma Department of Public Safety, Box 1826, Oklahoma City, has done a good job on bicycle safety with the help of chiefs of police, superintendents of schools, city safety councils and Parent-Teacher Associations. Its pamphlet "Kiwi" contains safety tips on walking, riding, driving, bicycling, swimming, boating, camping and hiking. The wording is concise and to the point.

A catalog of safety booklets available in 1968, listing 30 scriptographic items that cover all phases of the problem, is published by Channing L. Bete Co., Inc., Greenfield, Massachusetts 01301.

Many Auxiliaries are showing renewed interest in making their communities more safety-conscious by promoting safe-driving campaigns. Seatbelt campaigns, driver-training courses in schools, and driver education are three top projects in this area. In Fort Wayne and Allen County, Indiana, for example, the public is being educated to the importance of seat belts in reducing traffic deaths and injuries by means of a year-long program conducted by the AMA, the National Safety Council and the U. S. Public Health Service, in cooperation with local groups.

The Summit County Medical Society, in Akron, Ohio, has taken another approach to the traffic-safety problem, and is participating in a special school for traffic-law violators sponsored by the local Junior Chamber of Commerce. The course, consisting of a four-week training program for reckless drivers, was taught by members of the State Highway Patrol with the assistance of the County Medical Society's traffic safety committee.

Those last two news items were taken from the AMA's public-relations periodical that is called PR. It contains general public relations information, explains how to organize for PR action, and outlines dozens of projects by which medical societies can win added respect and renewed confidence. If your husband hasn't yet brought home a copy of PR, ask him to do so. You'll find it extremely worthwhile.

The AMA has a first-aid manual which you can order for 15¢ per copy (cheaper in large quantities) from 535 North Dearborn Street, Chicago 60610.

"Hands of Action" is a 40-minute color film depicting recommended procedures for managing emergency health-care situations. It can be borrowed free of charge from the National Medical Audio-Visual Center (Annex), Chamblee, Georgia 30005.

If the need for a babysitting training program exists in your community, and you wish to initiate one, kits and other information are available from National Auxiliary headquarters. GEMS (Good Emergency Mother Substitute) packets can be obtained from the Woman's Auxiliary to the AMA, at the AMA's Chicago address.

If your organization is interested in the Block Mother Plan, pamphlets concerning it can be obtained from the National Auxiliary. Or if you would like first-hand information, Mrs. Clair Updegraff, 425 Mississippi Boulevard, Bettendorf, has been responsible for starting a program of that sort that has been very effective in her town. In this connection, always keep in mind the need for teaching children to refuse rides or candy that strangers may offer to them.

The Davenport Fire Department has been chosen as one of a hundred such organizations to test a newly developed civil defense training program. Called "Self-Help in Fire Emergencies," it is designed primarily to prepare property owners to protect their homes from fire during a regional or national disaster when the services of their local fire department may not be readily available. Some of the subjects to be presented are fire prevention, fire behavior, evacuation, rescue, and basic fire-fighting techniques—all relating to our homes. Actual practice in the use of fire extinguishers is planned. There are to be three classes of two hours each, and Davenport Fire Department personnel will serve as instructors. As Dis-

aster Preparedness and Safety Chairman of the State Auxiliary, I am to be included in one of the classes.

Since we have one or more devastating tornados in Iowa almost every year, it behooves all of us to find out what the average citizen can do for the victims of storms.

We are inclined to be optimistic about a nuclear attack, but many things have been taking place that we never dreamed could happen in our beloved country. Governors are advocating fall-out shelters in all new buildings. Do you know where your closest fall-out shelter is? If you have made no arrangements for a shelter, do you know what to do in your home during a time of nuclear attack?

A conference in Albuquerque, New Mexico, on November 15 and 16 will hear a report from the National Safety Council's Committee on Disaster Medical Care. I'll not be able to go, but if another of our Iowa Auxiliary members can attend, I'll be glad to send her the registration form.

It isn't too early to be thinking of Christmas safe-holiday campaigns. Help make your community fire-safe during the holidays by flameproofing all trees and other greens. Let's not have a winter "blunderland," but a winter wonderland! Have your car checked for safety before the snow flies, and drive even more carefully on snow than on clean pavement. Protect your driver's license! Know the law!

May you have a safe and successful year.

—MAY D. WEIS (MRS. H.A.)

From the Direct Line

MAKING COUNTY AUXILIARY MEMBERSHIP MEANINGFUL

"Our membership theme for 1968-69 is 'Let's Make Membership More Meaningful,' and it is in the county Auxiliary that *membership* and *action* begin," says Mrs. G. Prentiss Lee, first vice-president and membership chairman for the Woman's Auxiliary to the AMA.

Each county Auxiliary should have a strong membership committee, she declares. That committee should search out and invite potential members to join, and should encourage early payment of dues and regular attendance at meetings. The size of the committee should be suited to the size of the job. The committee could include:

1. Membership chairman and co-chairman to reenlist old members, interest new members, recruit dropouts and aim for 100 per cent participation.

2. Hospitality chairman—greeters at meetings for warm and gracious fellowship and other hospitality ideas such as door prizes and attendance gimmicks.

3. Telephone chairman—to invite all potential members to join, to attend meetings, teas, or coffees, recognition days, joint meetings, etc.

4. Program chairman—to insure interesting and informative programs at all meetings, to plan special events, etc.

5. Project or program development chairman—to organize and develop constructive, meaningful and worthwhile service projects depending on the health needs of the local community and the county medical society.

6. Treasurer—to collect the membership dues and propose methods for more effective collections.

Now take a look at your Auxiliary and answer these questions:

"What does the Auxiliary do?" Are your *goals* well defined and understood by the membership? Do you ask your medical society for actual representation in *planning,* and do you request *help* from your executive secretary when it is needed? Do the members of your medical society really know about your Auxiliary's accomplishments in its behalf? Is your YEARBOOK filled with reports of programs which have been scheduled because they were available or free, or do they provide doctors' wives with information they do not normally receive through other organizations? Are your meetings so cluttered with long, detailed and boring discussions that the presentations of well informed speakers must be hurried through and your members short changed?

In order to increase and strengthen your membership, provide members with full and adequate *explanations* of our goals and aims, *placement* in duties where their talents can best be utilized, *training* and *advancement* to greater responsibilities, and adequate *appreciation* and *recognition.* There should be a job for everyone, but let's not allow our members to die on the vine of inconsequential tasks. Every member is entitled to a feeling of belonging, of being a working cog in the organization providing opportunities for leadership development.

HERE ARE MORE MONEY-RAISING IDEAS FOR AMA-ERF

By this time all national, regional, state and county AMA-ERF chairmen have received their new AMA-ERF fund-raising portfolios. The portfolio contains presentations of many brand new fund-raising ideas along with reviews of the most profitable ones from years past.

Some of the most exciting include: chess sets from Gallant Knight, a new line of playing cards from Arrco, and the "Doctor's Wife" rose bush. Drawing Board has provided AMA-ERF with a new and bigger Christmas card selection, as well as an exclusive line of stationery. From the sales of both Christmas cards and stationery, Drawing Board will give AMA-ERF 40 per cent of the profits.

The memo pads—available free from AMA headquarters—now come in lovely shades of pink, blue, yellow and green.

And for your favorite golfer at Christmas time, don't forget the golf balls from Faultless Rubber Company. They retail at $9.00 and $12.00 a dozen,

and have been big profit-makers for AMA-ERF.

"These are only a few of the fabulous AMA-ERF fund-raisers," says Mrs. Chester A. Young, national chairman. "Read the portfolio for complete details on all the items mentioned, plus many many more."

For further information on AMA-ERF contact your state chairman, Mrs. Ralph Wicks, 204 South Story Street, Boone, Iowa 50036.

An Action Program to End TV and Movie Violence

I do not need to tell you that the violence of our times is a threat to the well-being of every person in our nation—and especially to our young people. Violence kills and maims as surely as does disease. It can irreparably blight our lives and can darken the future of every young person unless we act to stop it.

As MCCALL'S recently pointed out, "Women can stop the outpouring of violence and sordidness on our television screens and in the motion-picture theaters." This is only one factor in the brutalization of our national life, but it is a factor we can do something about—*now*.

Much is being written about the situation—but not enough action is being directed at the sources of decision on programming and content. I propose that every Auxiliary engage in an action program directed where it can do the most good. Here is what Auxiliaries can do:

1. Appoint action committees to call personally on: Managers of all TV stations in your area. Owners or managers of all local movie chains and individual theaters. Heads of local advertisers on TV.

2. Form joint-action groups with PTA's, Leagues of Women Voters, church women's groups, teachers.

3. Set up a viewing and screening schedule to monitor all shows, keeping records of the degree, frequency, time, etc., of violence on each station and in each theater. (Be careful *not* to give any appearance of favoritism or of suggesting a boycott of any particular station or theater. That is not the tack we should take.)

4. Feed this information steadily to the local TV critics, editorial writers and movie reviewers as background for their commentaries.

5. Launch letter-writing campaigns to the presidents of national advertisers, TV networks, advertising agencies and movie producers. Emphasize the Auxiliary's concern for sound health education; avoid abusive language or threats of reprisal. Here are some addresses you can write to: Julian Goodman, President, National Broadcasting Co., 30 Rockefeller Plaza, New York City; Frank Stanton, President, Columbia Broadcasting System, 51 W. 52nd Street, New York City; Leonard Goldenson, President, American Broadcasting Company, 1330 Avenue of the Americas, New York City; Jack Valenti, Motion Picture Association of America, 522 Fifth Avenue, New York City.

6. Support community forums on violence and urge other women's groups to participate.

7. This is an election year. Send letters to the presidential candidates. There couldn't be a more opportune time to bring action to bear so as to affect national policy.

I urge you to give top priority to this campaign. Keep national Auxiliary headquarters informed of the response to your action program (including copies of letters sent and received), so that we may gauge the overall effectiveness of our efforts.

—MRS. C. C. LONG
National President

Make Up Your Mind

Now is the time for all good women to come to the aid of their party. This is not meant to be used as a typing exercise. Please take it seriously.

The first Tuesday in November should be marked on your calendar as a RED LETTER DAY. On this day it is your right, privilege and obligation to vote for the candidates who you feel merit your vote as being best qualified to represent you.

Are you now registered? Do you know your voting district? Do you know your candidates? If not, what are YOU going to do?

—From Utah's THE CAPSULE, August, 1968

Important

To make sure that every Auxiliary member receives MD'S WIFE, we are asking county treasurers to send dues and completed membership cards as early in the year as possible to the state treasurer, Mrs. Joseph Veverka, Prairie City, Iowa rather than waiting for the final dues date of March 21, 1969. New members will receive MD'S WIFE as soon as their dues have been recorded in the national office.

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

President-Elect—Mrs. D. W. Coughlan, 5410 Grand Avenue, Des Moines 50312

Recording Secretary—Mrs. E. D. Wiley, 30 West Kings Highway, Sioux City 51104

Treasurer—Mrs. J. F. Veverka, Box 324, Prairie City 50228

Editor of THE NEWS—Mrs. W. B. Eidbo, 1415 Thompson Avenue, Des Moines 50316

Assistant Editor—Mrs. D. A. Mater, 302 South Fourth Street, Knoxville 50138



Personals



Dr. Frank Ober, a Burlington physician and a former president of the Iowa Medical Society, discussed the economics and sociology of health care at a noon meeting of the Burlington Rotary Club held at Hotel Burlington on Monday, August 26. **Dr. Sixto E. Guiang,** also a Burlington physician, introduced Dr. Ober and spoke briefly on the current shortage of doctors, nurses and ancillary health care personnel.

Dr. H. M. Andersen, of Strawberry Point, attended the International Health Conference held in Copenhagen, Denmark, in September. Mrs. Anderson accompanied him on the trip, and they visited relatives in Denmark and two other European countries while abroad.

Dr. Jaime E. Perea joined the 11-member staff of Gilfillan Clinic, Bloomfield on September 1 in the obstetrics and gynecology department. Dr. Perea received his medical degree at Javeriana University School of Medicine in Bogota, Colombia, in 1960. He was in private practice in Bogota until moving to Baltimore, Maryland. There he served an internship at Bon Secours Hospital and a residency at Saint Agnes Hospital. Dr. Perea has been chief resident at Saint Agnes since July, 1967. He will fill the position at the Gilfillan Clinic vacated earlier this year by **Dr. A. M. Yazdi,** who moved to Keokuk to enter solo practice.

Dr. E. F. Ritter, a Centerville physician, was one of the 52 delegates from Iowa who attended the Democratic National Convention in Chicago. Dr. Ritter has been active in the Democratic Party of Iowa for 22 years and has attended four previous conventions.

A talk on the health problems of the elderly by **Dr. Philip McFadden,** of Marshalltown, was the program feature for the dinner meeting of the Senior Citizens held on Monday, August 12, at the Fisher Community Center there. Dr. McFadden also answered questions from those in attendance.

Dr. Frederick Brush, of Mason City, left on August 10 for Ceylon, where he will donate his services on the United States medical ship, *S.S. Hope.* Dr. Brush served on the ship several years ago when it was at a port in South America. Enroute to Ceylon, Dr. Brush will stop at London, Athens, Cairo and Calcutta.

Dr. R. D. Harris, an Anita physician since 1962, has entered into a partnership with two other doctors in a clinic at Harlan. A native of Wiota, Dr. Harris attended the U. of I. and the University of Nebraska. He obtained his M.D. degree at Creighton University and completed his internship at St. Catherine's Hospital in Omaha.

Dr. C. J. Lohmann, physician for the Iowa Army Ammunition Plant in Burlington, was listed in good condition at Burlington Hospital with bruises suffered Thursday, September 5, in a two-car accident near Burlington. A hospital spokesman said that Dr. Lohmann was uncomfortable but that he had suffered no broken bones.

Dr. Montague S. Lawrence, professor of thoracic surgery at the U. of I. College of Medicine, spoke at the September 23 dinner meeting of the Southeastern Division of the Iowa Heart Association held in Burlington. His topic was "Trends in Heart Surgery."

Titus C. Evans, Ph.D., of Iowa City, has been re-elected chairman of the Johnson County chapter of the American Cancer Society. Named to the Board of Directors were **Drs. Lee W. Van Voorhis** and **Stanley Greenwald,** both of Iowa City.

Dr. Paul L. Warner was the guest speaker at the August 20 meeting of the Cedar Falls Rotary Club. His topic was "Like Father—Like Son." Dr. Warner is a psychiatrist associated with Medical Associates, in Cedar Falls, and has served on the staff of the Black Hawk County Mental Health Center.

Dr. Paul J. Leehey, of Independence, has been appointed to serve a three-year term on the policy-making board of the State Department of Public Health. Dr. Leehey's appointment was made by **Governor Harold Hughes.** Dr. Leehey succeeds **Dr. Paul J. Laube,** of Dubuque, on the board.

Dr. Joseph A. Gossett, an anesthesiologist, has joined the medical staff of the McFarland Clinic in Ames. A graduate of the State University of Iowa College of Medicine, Dr. Gossett interned at San Bernardino, California, County Hospital and took his residency in Iowa City. He later served as a captain in the Army Medical Corps and completed a tour of duty in Viet Nam.

Dr. W. N. Shelton, who recently resigned as director of the Central Iowa Mental Health Center, has opened an office in Ames for the private practice of psychiatry. Dr. Shelton received his B.A. and M.A. degrees at the University of Cincinnati and his Ph.D. in clinical psychology at the University of Chicago. He earned his M.D. degree at the University of Tennessee College of Medicine, interned at the Methodist Hospital in Memphis, and took his psychiatric residency training at the Mental Health Institute at Independence.

Dr. Mark Pabst, a Bloomfield pediatrician, spoke on childhood diseases at the August 19 meeting of the Bloomfield Rotary Club.

Dr. Homer L. Skinner, a Carroll surgeon, is seeking election to the Carroll Community School District Board of Education. Dr. Skinner has been active in a number of civic projects in Carroll.

Dr. William A. Fisher, of Creston, has been named by the American Academy of Pediatrics to serve as a Head Start consultant in Iowa. Some 525 physician consultants have been named by the Academy to evaluate the medical aspects of the Head Start programs. They are being conducted in nearly 2,000 communities in the United States. Dr. Fisher will work with the Office of Economic Opportunity representatives responsible for funding and evaluating the Head Start health programs, helping them interpret the needs of the children, the resources of the community, and the success of the Head Start program.

Dr. A. J. Herlitzka, a Mason City surgeon, was the guest speaker at the August meeting of the Lake Mills Ambulance Service group. Dr. Herlitzka spoke and showed slides on emergency care of patients.

Mrs. Irma Bain, 71, wife of **Dr. C. L. Bain,** of Corning, died on Saturday, August 17, after the car she was driving collided head-on with a car driven by **Richard McMahon, Jr.,** of Corning. Officers said the two cars collided on the crest of a hill on a gravel road three miles north of Prescott, in Adams County.

Walter M. Block, M.D., director of the Mercy Hospital Child Evaluation Clinic, in Cedar Rapids, **George C. Caudill,** M.D., of Des Moines, and **William C. McCormack,** M.D., of the McFarland Clinic, in Ames, were guest faculty members at a Pediatrics Conference held on September 11 and 12 at the U. of I. Health Center. Dr. McCormack, who is president of the Iowa Chapter of the American Academy of Pediatrics, presided at that group's fall business meeting, held on September 11. The medical postgraduate conference was sponsored by the U. of I. Department of Pediatrics, the Iowa Chapter of the American Academy of Pediatrics and the Iowa State Services for Crippled Children.

Dr. Frank Ober, of Burlington, has been reappointed a member of the regional advisory group of the Iowa Regional Medical Program.

Dr. Malcolm A. McCannell, a Minneapolis ophthalmologist, spoke on "One Dozen Vexing Eye Problems for the Family Doctor" at the Linn County Medical Society's dinner meeting held at the Cedar Rapids Country Club on Thursday, September 12. Dr. McCannell is a fellow of the American Academy of Ophthalmology and Otolaryngology and also of the American College of Surgeons.

Mr. Donald L. Taylor, executive vice-president of the Iowa Medical Society, was named secretary-treasurer of the Iowa Health Council at the annual meeting of the organization's board of directors held in Des Moines on Wednesday, September 4. Until this year the group was called the Iowa Interprofessional Association.

Dr. Clark N. Cooper, founder of Surgical and Orthopaedic Associates, in Waterloo, retired from practice on August 1, 1968. Except for the time that he spent in the Navy during World War II, Dr. Cooper practiced uninterruptedly in Waterloo for 34 years. Dr. Cooper and his wife Dale plan to spend their leisure time at their summer home near Brainerd, Minnesota, and at their apartment



Dr. C. N. Cooper

in Naples, Florida, but this winter they will be far from either of those places. Dr. Cooper and his wife, a registered nurse, plan to join the staff of Project Hope in December, as volunteers, to serve two months in Ceylon. The Coopers leave New York December 10 for their two-month tour of duty. Their younger daughter, Susan, a nurse at the Veterans Research Hospital in Chicago, plans to join them in Ceylon for part of their tour of duty. Dr. Cooper has long been known as an outstanding member of his profession as well as a devoted public servant with an exemplary record of service to his country. Dr. Cooper received a Naval commendation for his service during World War II and was released as a commander in 1946. He has served on the board of directors of the Waterloo Chamber of Commerce and as chairman of the Waterloo Airport Commission. In addition, Dr. Cooper is a past president of the Black Hawk County Medical Society, is sixth district councilor for the Iowa Medical Society, and holds memberships in the American Board of Surgery, the American College of Surgeons, the Iowa Academy of Surgeons and the Iowa Clinical Surgical Society.

Dr. W. D. "Shorty" Paul, team physician for Iowa's Hawkeyes since 1940, was honored at a dinner held in Iowa City on October 4. Dr. Paul retired in July from the University's College of Medicine, where he had been a faculty member for 38 years. He will continue as Iowa's team physician. The dinner was sponsored by his friends in the U. of I. College of Medicine.

A specialist in the field of human genetics opened the fall program of the Wapello County Medical Society, Tuesday evening, September 3, at the Ottumwa Country Club. **Henry T. Lynch,** M.D., associate professor and chairman of the Department of Preventive Medicine and Public Health at Creighton University, in Omaha, addressed the group on "Cancer, Heredity and Genetic Counseling: A Guide to Early Diagnosis."

Dr. James O. Moermond, Jr., the son of **Dr. and Mrs. James Moermond, Sr.,** of Buffalo Center, has joined the Spirit Lake Medical Center as a general practitioner. The younger Dr. Moermond received his pre-medical training at Iowa State University, and his M.D. degree from the U. of I. College of Medicine in 1965. He served his internship at Ramsey County Hospital in St. Paul, Minnesota, and then entered the U. S. Army. For the past 13 months, he has been stationed in Korea. He is a native of Spirit Lake.

Dr. W. H. Verduyn, who has been practicing medicine in both Hudson and Reinbeck, has announced that he is closing his Hudson office. Dr. Verduyn stated that he felt he could better serve his patients by working from one office.

Dr. W. B. Henderson, an Oelwein surgeon and physician since 1937, has sold his office to **Dr. John Ahrens** effective October 1. The office building was completed in August, 1960 and is located across from Mercy Hospital. Dr. Henderson and his wife recently purchased a home on Gull Lake, north of Brainerd, Minnesota, and plan to make it their permanent residence. They expect to move to Brainerd on November 1. Dr. Ahrens came to Oelwein on July 5, 1955. His former office location was heavily damaged by the tornado that struck Oelwein on May 15 of this year.

Dr. J. W. Martin, a retired Holstein physician, has been presented a plaque which represents a life membership in the Holstein Chamber of Commerce. **Mr. Don Vollmar,** the Chamber of Commerce president, made the presentation to Dr. Martin.

On August 30, **Dr. D. N. Crabb** moved to his new office located at the corner of 14th Street and 2nd Avenue North in Denison. On September 12 **Dr. James L. Flood,** also of Denison, moved into the same building. The doctors will have 2,500 square feet of office space in the new location.



The will of **Dr. Maurice H. Noun,** a Des Moines dermatologist, who died on September 6, contained a bequest of $25,000 to the Department of Dermatology at the U. of I., to finance either research or student scholarships. The U. of I. College of Medicine was not one of the schools Dr. Noun had attended.

On September 5 **Dr. Manly Michaelson,** of Bellevue, moved his practice to a building which he purchased a year ago and which has been completely remodeled for his use.

Dr. W. M. Krigsten, of Sioux City, president-elect of the Iowa Medical Society and a member of the State Board of Health, objected at a meeting of the latter group on September 11, to a proposal supported by **Drs. J. F. Speers** and **Arnold Reeve,** of the State Department of Health, that physicians henceforth be required to submit written reports containing the names, rather than just the case numbers, of patients treated for venereal disease. He questioned the certainty that such reports could be kept confidential. The other two men said that most written reports now include patients' names, and that a doctor's insistence on an investigator's coming to him to get each name by word-of-mouth merely delays the case finding process. When a vote was taken, Dr. Krigsten was alone in opposition to the change.

The Polk County Medical Society and its Woman's Auxiliary held their annual fall party at the Des Moines Golf and Country Club on September 18.

Dr. Joel M. Linford recently returned to general practice at the Hilltop Clinic, in Des Moines, after a two-year tour of military service.

Dr. Ronald D. Eckhoff succeeded **Dr. J. F. Speers** as head of Community Health Services in the State Health Department when Dr. Speers became commissioner. Dr. Eckhoff has an M.D. from Michigan and an M.P.H. from Harvard. He has been in the Department for some time, but on the payroll of U.S.P.H.S.

Dr. Dennis H. Kelly, Jr., an internist, discussed resuscitation procedures at the September 18 meeting of the Des Moines Chapter of the Iowa Association of Medical Assistants.

Dr. Charlotte Fisk resigned as medical director of the Des Moines Health Center, effective

October 5. She will devote full time to her private practice of pediatrics.

Dr. James A. Robertson, who practiced pathology at Iowa Methodist Hospital for a short time, early this year, after finishing his residency in Iowa City, has moved to St. Mary's Hospital, Evansville, Indiana.

Dr. Richard E. Preston, of Des Moines, addressed a group of senior high school students at Cottage Grove Presbterian Church there, September 22, on the subject of narcotics.

On August 28 at the fall dinner meeting of Des Moines metropolitan area high school athletic coaches **Drs. Robert Anderson, Dennis Wilson** and **Keith Vanden Brink** discussed medical problems associated with contact sports. Dr. Vanden Brink reported that 95 per cent of knee injuries occur during athletes' high school careers.

The Rotary Club of Coon Rapids presented an electric wall clock to **Dr. and Mrs. C. A. Johnson** as a token of the community's esteem for them.

At a meeting of the State Board of Regents, held in Ames on September 12, **Dr. Robert C. Hardin,** U. of I. vice-president for medical affairs, opposed establishing a second medical school in Iowa, declaring that such a move "would not materially improve medical care in Iowa."

"Experience shows," he said, "that significant increases in the number of medical graduates in Iowa have not been followed by an automatic increase in the physician population in Iowa." He commented that other midwestern states have had similar experiences. The regents concurred with him, and voted against establishing a new medical school or a branch medical school in Des Moines.

A reception for **Dr. James F. Speers,** recently named commissioner for the State Department of Health, was held on Thursday, September 12, at the Robert Lucas State Office Building in Des Moines.

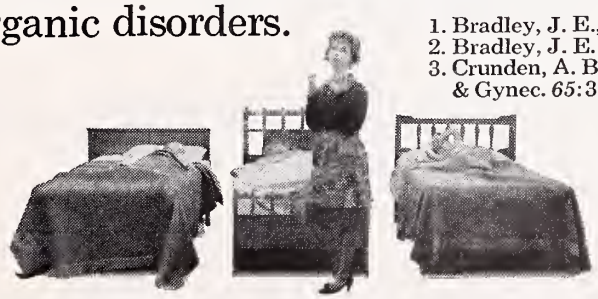
Dr. Arthur B. Henningsen, of Clinton, retired from the private practice of medicine on August 24, 1968.



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1. Bradley, J. E., *et al.*: J. Pediat. *38*:41 (Jan.) 1951.
2. Bradley, J. E.: Mod. Med. *20*:71 (Oct. 15) 1952.
3. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. *65*:311 (Feb.) 1953.



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Dr. Adrian E. Flatt, professor of orthopedic surgery at the U. of I., was one of the guest speakers at a Professional Seminar on "Surgical Management of Chronic Arthritis" presented by the Medical and Scientific Committee of the Illinois Chapter of the Arthritis Foundation on Friday, October 18, at the Sherman House in Chicago. Dr. Flatt's presentation was entitled, "Hand Deformities of Rheumatoid Arthritis Surgical Management."

On October 1, **Dr. Leonard K. Lackore** left his private practice of medicine at St. Ansgar to begin specialty training in Florida.

Clyde M. Berry, Ph.D., associate director of the U. of I. Institute of Agricultural Medicine, was one of six persons in the United States named to the National Air Pollution Control Agency Development Advisory Committee. Dr. Berry, a professor in the department of preventive medicine and environmental health, was appointed by **John T. Middleton,** commissioner of the National Air Pollution Control Administration (NAPCA). The NAPCA is part of the U. S. Public Health Service.

Frank K. Woolley, a former AMA staff member well-known to many Iowa doctors, has been named executive director of the Association of American Physicians and Surgeons. Since January, 1961, Mr. Woolley has been with the Field Service Division of the American Medical Association, first performing field work and, more recently, research in public affairs. He has had 30 years' experience in Washington, D. C., and has a wide acquaintance with members of both the House and Senate of the United States Congress. Mr. Woolley was legislative counsel for the American Farm Bureau Federation and represented it before Congressional Committees from 1951 through 1958. As associate director of the Americans for Constitutional Action in 1959 he developed the ACA Voting record index which analyzes votes of congressmen in relation to fundamental economic, political and legal issues.



Mr. Woolley

Dr. Herbert L. Nelson, assistant director of the Psychopathic Hospital at the U. of I., has been

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named director of the Iowa Mental Health Authority (IMHA). Dr. Nelson's appointment was announced Friday, September 13, to the State Board of Regents. An associate professor of psychiatry, Dr. Nelson succeeds **Dr. Paul E. Huston,** director of the Psychopathic Hospital, who has headed the IMHA since 1956. Dr. Huston asked to be relieved of the IMHA directorship. Dr. Nelson received his B.A. degree in 1943 and his M.D. degree in 1946, both from the U. of I. After interning at the U. of I. Hospitals, he took specialty training in psychiatry at Brooke General Hospital, San Antonio, Texas, the Veterans Administration Hospital, Knoxville, Iowa, and Oregon State Hospital, Salem, Oregon.

Dr. George H. Scanlon, a surgeon and a past-president of the Iowa Medical Society, is hospitalized in Iowa City with cancer of the pancreas.

About 100 nurses attended a program on intensive coronary care at the Clarinda Municipal Hospital September 19. **Dr. Donald L. Warkentin,** an assistant professor of internal medicine at the U. of I., spoke on "Coronary Risk Factors," and **Dr. H. S. Frenkel,** a Clarinda internist who heads the intensive-care unit there, spoke on "Medical Management of Myocardial Infarction."

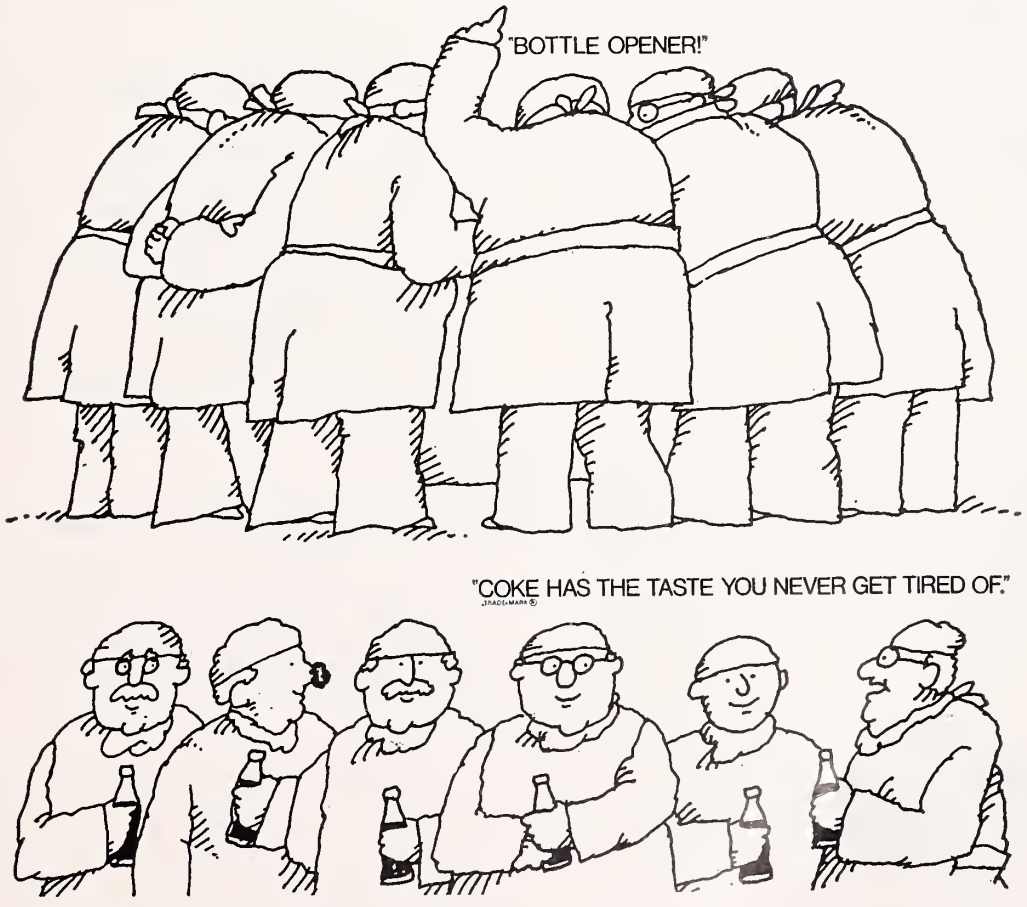
Dr. Lee Forrest Hill, a Des Moines pediatrician, was a patient in the cardiac unit at Iowa Methodist Hospital for a short time about a month ago. As this is written, he is convalescing at home.

At the September meeting of the Fayette County Medical Society, in West Union, **Dr. Richard Sheldon,** a specialist in obstetrics and gynecology at the Mayo Clinic, presented a paper on fetology.

Dr. William Wildberger, superintendent of the Woodward State Hospital and School and chairman of the program entitled "Iowa's Progressive Action for the Retarded," has announced that an all-day Conference on Mental Retardation, principally for lay people, will be held at the Kirkwood Hotel, in Des Moines, Friday, November 8.

Dr. Ray Jackman, a specialist in colon and rectal surgery at the Mayo Clinic, addressed a joint meeting of the Palo Alto, Kossuth, Pocahontas, Emmet, Dickinson and Clay County Medical Societies at the Emmetsburg Country Club on September 10. His boyhood home was in Emmetsburg.

On September 15, **Dr. Burns Byram,** of Marengo, placed third in the Harold's Club Trans-



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At the Twenty-ninth Annual Convention of the Iowa Society of Radiologic Technologists, September 19-21 at the Sheraton-Warrior Motor Inn, **Dr. Horst G. Blume,** of Sioux City, lectured on "Neuroradiologic Procedures."

The IMS Board of Trustees, at its September 18 meeting, appointed **Dr. Gerald A. Fry,** of Vinton, to replace **Dr. C. N. Cooper,** of Waterloo, as the member of the Judicial and Executive Councils for the Fourth District. Dr. Cooper, as has been noted previously in this issue of the JOURNAL, recently closed his practice and left the state.

Deaths

Dr. Albert L. Yocom, 81, who practiced medicine at Chariton for 47 years, died Wednesday, August 28, at Lucas County Memorial Hospital in Chariton. Dr. Yocom graduated from the University of Illinois School of Medicine in 1909. He was the owner and operator of the Yocom Hospital, in Chariton, which was closed recently.

Dr. Maurice H. Noun, 64, a practicing dermatologist in Des Moines for 35 years, died Friday, September 6, of a heart attack at Iowa Methodist Hospital. Dr. Noun was born in Russia and was brought to the United States in his childhood. He received a degree in pharmacy from the University of Minnesota and his medical degree from St. Louis University School of Medicine. He did his postgraduate work in dermatology at New York Postgraduate Hospital. Dr. Noun was a member of the Polk County and Iowa Medical societies, the Academy of Dermatology, the Chicago Dermatologic Society and the Society for Investigative Dermatology.

Dr. Charles Stephen Hickman, 84, of Centerville, died at St. Joseph Mercy Hospital there, on September 14. He was a graduate of the Northwestern University Medical School, and was a fellow of the American College of Surgeons. He had continued practicing until he became ill, just a few months ago.

Dr. Charles H. Merrill, 91, who specialized in problems of the eye, ear, nose and throat at Oskaloosa from 1929 to 1951, died in Orlando, Florida, early in September. His home, since he left Oskaloosa, was in Kennebunkport, Maine. He was a 1905 graduate of the Harvard Medical School.

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- A Study of Iowa Medical Physicians, Section I: Number and Distribution—John C. MacQueen, M.D.
- Risk Factors in Coronary Artery Disease—Donald L. Warkentin, M.D.
- Non-Gynecologic Malignancies and Pregnancy—Norman K. Rinderknecht, M.D.
- Toward Understanding Suicide—Russell Noyes, Jr., M.D.
- U. of I. Clinical Pathologic Conference No. 498 (Drug Treatment, Leukopenia, Exfoliative Dermatitis)



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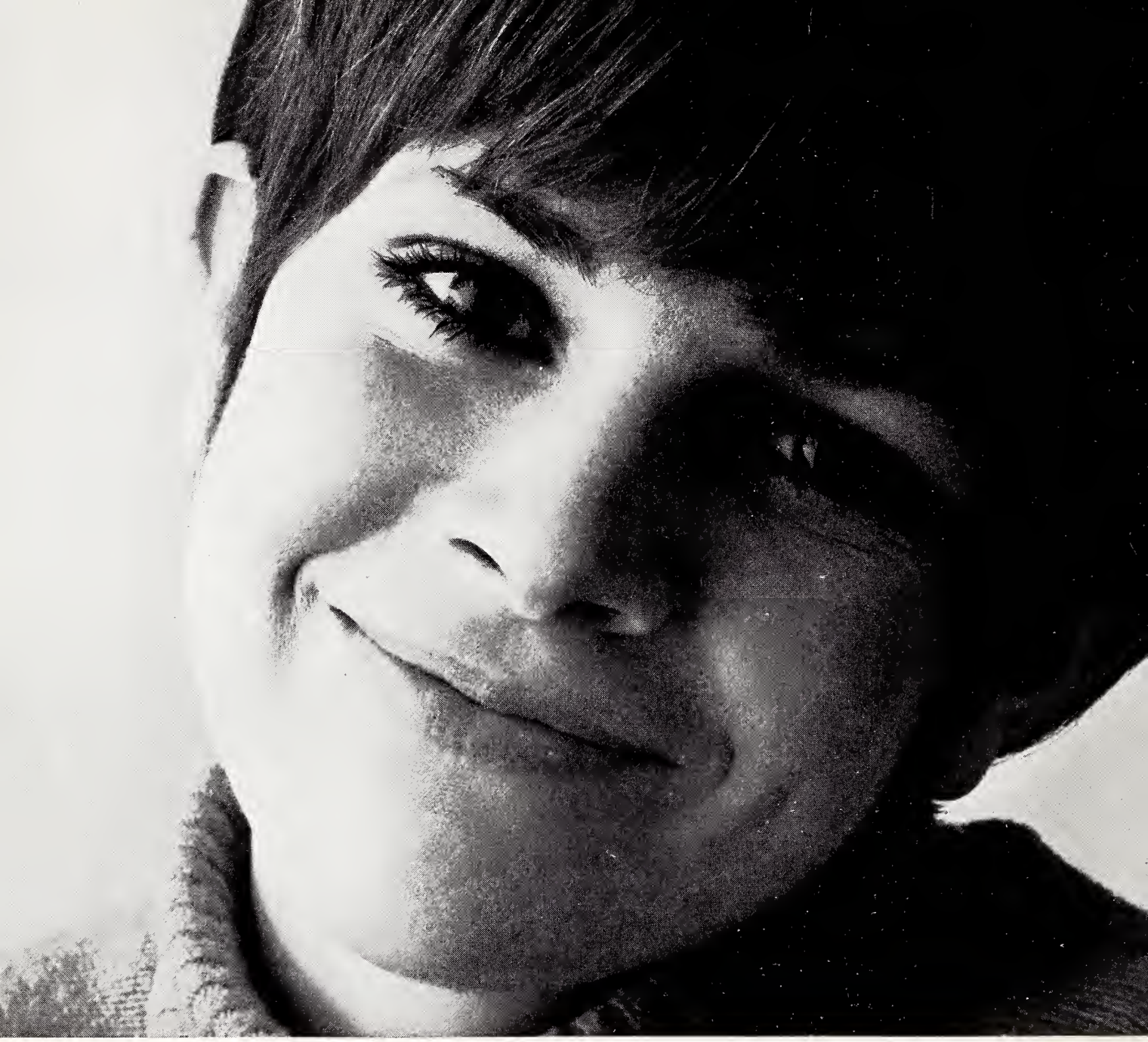


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Vol. LVIII November, 1968 No. 11

CONTENTS

A Study of Iowa Medical Physicians, Section 1—The Number and Distribution of Doctors of Medicine
John C. MacQueen, M.D., Iowa City . . . 1129

SCIENTIFIC ARTICLES

Risk Factors in Coronary Artery Disease
Donald L. Warkentin, M.D., Iowa City . . . 1137

Non-Gynecologic Malignancies and Pregnancy—Review
Norman K. Rinderknecht, M.D., Des Moines . 1142

Toward Understanding Suicide
Russell Noyes, Jr., M.D., Iowa City 1147

University of Iowa College of Medicine Clinical Pathologic Conference No. 498 (Drug Treatment, Leukopenia, Exfoliative Dermatitis) . 1153

EDITORIALS

Thanksgiving Throughout the Year 1167

Antibacterials in Urinary Infections 1167

Pessimism and Optimism Regarding Osteoporosis 1169

Cholecystostomy 1170

Carcinoma of the Ovary 1172

SPECIAL DEPARTMENTS

Month in Washington 1118

Coming Meetings 1127

President's Page 1166

In the Public Interest facing page 1166

University Hospitals Drug Letter
The Unit Dose Drug-Distribution System, H. J. Black and W. W. Tester 1174

Information From the Iowa Heart Association
Present Status of Permanent Pacing of the Heart 1178

The Doctor's Business 1180

Journal Book Shelf 1181

State Department of Health 1183

Woman's Auxiliary News 1185

Iowa Association of Medical Assistants . . . 1188

Personals 1189

Deaths 1202

MISCELLANEOUS

Course in Intensive Coronary Care 1127

Malpractice-Insurance Rates Raised 1141

Statement on Influenza 1152

Peanut-Oil Base Will Add Effectiveness to Flu Vaccine, But Not This Year 1165

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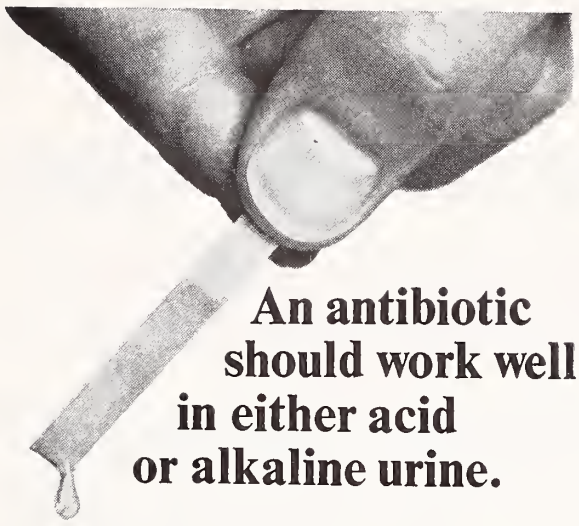
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Meprobamate: Drowsiness may occur and can be associated with ataxia; the symptom can usually be controlled by decreasing the dose, or by concomitant administration of central stimulants. Allergic or idiosyncratic reactions: maculopapular rash, acute nonthrombocytopenic purpura with petechiae, ecchymoses, peripheral edema and fever, transient leukopenia. A case of fatal bullous dermatitis, following administration of meprobamate and prednisolone, has been reported. Hypersensitivity has produced fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, stomatitis, proctitis (1 case), anaphylaxis, agranulocytosis and thrombocytopenic purpura, and a fatal instance of aplastic anemia, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity, usually after excessive dosage. Impairment of visual accommodation. Massive overdosage may produce drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

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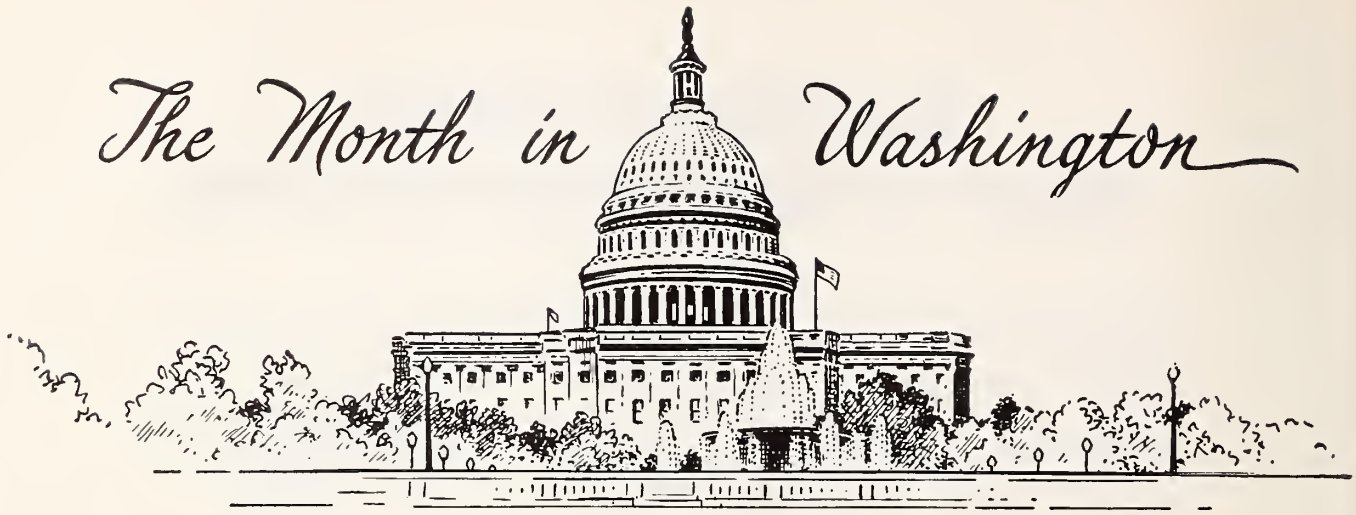
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The Month in Washington



Washington, D. C.—The American Medical Association protested strongly against proposed new Medicaid regulations affecting (1) payments to physicians and (2) utilization review.

In a protest to the Department of Health, Education and Welfare, the proposed regulation on physicians' "reasonable charges" was described as an anomaly because it would be based on payments received, with no consideration given to the usual and customary fee.

Since Medicare payments made by the government are 80 per cent of the reasonable charge, the "reasonable charge" could become the maximum for every charge under Medicare, the AMA said. Or, were physicians to receive less than full payment and were to write off losses, the reduced payments could become the basis for the "reasonable charge" under Medicaid.

The new regulation on utilization review would require a state Medicaid plan to provide for utilization review of all items of service, including a physician's services in his office or the patient's home. The AMA said it could lead to a set of national standards, with authorized treatment for each medical condition limited by regulation.

The AMA said it is not opposed to a "claims review" process such as is now in operation in many areas, or as is conducted under Medicare. Nor, the AMA added, did it find fault with inquiring into a physician's conduct where fraud is alleged, or where, on the basis of Medicare claims submitted, it appears that there is reasonable ground for investigation of possible fraud.

In another development, the Advisory Commission on Inter-governmental Relations supported the Medicaid goal of providing comprehensive health care for the needy and medically needy by 1975, but proposed changes in financing and operating the federal-state program. The report particularly concerned "the virtually unmanageable fiscal burden imposed on state and local governments by the program." It urged that consideration be given to "broadening Medicaid's financial base through increased involvement of the private sector through an employer-employee contributory health insurance system." If Congress approved this proposal, it would be a giant step toward national compulsory government health insurance.

The Commission rejected proposals to limit federal sharing in Medicare and to establish national eligibility standards for beneficiaries.

The report was made public soon after the Senate voted a $500 million cutback in Medicaid funds, and when some states already were trimming their Medicaid programs because of a financial pinch.

The Commission recommended that the states "move vigorously to experiment with methods of increasing the efficiency and economy of health services under the Medicaid program," including: (1) Reimbursing hospitals contingent on their operating under an acceptable standard of management efficiency, (2) expanding prior authorization for elective surgical procedures, (3) payment for physicians' services on a basis other than usual and customary charges, (4) use of co-payments for the purchase of specified health care services, and (5) improved techniques of utilization review.

The 26-member Commission is a bipartisan body established by federal law in 1959 to maintain continuing review of the relations among federal, state and local governments. Its membership consists of governors, mayors, county officials, state legislators, and representatives of both houses of Congress, the federal executive branch, and the general public. The chairman is Mr. Farris Bryant, a former governor of Florida.

* * *

Congress approved a two-year extension of the regional medical programs and a one-year extension of the Hill-Burton program of federal aid

(Continued on page 1119)

for construction of hospitals and other health care facilities.

The legislation authorizes appropriation of $65 million for the regional medical programs in the current fiscal year ending next June 30, and $120 million for the next year. The Senate had voted a three-year extension, but a House-Senate conference committee dropped that provision. House conferees, however, emphasized that "this program, although a newly established one, has already proved its value and should be considered as a permanent program." They said they accepted a two-year extension to give the next Congress an opportunity to review the program.

The Hill-Burton program received $195 million for hospitals and $100 million for other health-care facilities. The conferees abandoned Senate provisions for a new three-year program of federal loans of $200 million a year for hospital modernization and a guaranteed loan program of the same amount with a federal subsidy of interest. These provisions also were left for further consideration by the next Congress.

A two-year total of $40 million was authorized for construction and staffing of rehabilitation facilities for narcotics addicts and alcoholics. As a declaration of Congress, the measure states: "Alcoholism is a major health and social problem afflicting a significant proportion of the public, and much more needs to be done by public and private agencies to develop effective prevention and control."

The program of grants for family health service clinics for migratory agricultural workers was extended for two years, with $9 million authorized for the current fiscal year and $15 million for the next year.

* * *

Congress approved legislation designating November 17-23 as "National Family Health Week." The legislation termed the week "a means of focusing national attention . . . upon the accomplishments of the American health care system and the central role played by the family physician in the maintenance of superior medical care for Americans of all ages and from all walks of life."

* * *

The Committee on Emergency Medical Services of the National Research Council has recommended establishment of a nationwide program for the training of ambulance personnel.

The Committee proposed guidelines for such training, stating that there is at present "no uniformity in the course of instruction and . . . no generally accepted standards of proficiency to be used by those empowered to certify ambulance personnel."

The Committee's recommended guidelines cover: either the standard or advanced first aid courses of the American National Red Cross as a prerequisite, the operation of emergency vehicles, safety precautions at the accident scene, priorities of care, records, the use of communication systems, the use of equipment and supplies, medicolegal problems, and rescue procedures.

The levels of proficiency designed to result from the course proposed in the report are attainable in most areas of the country within a reasonable time, the Committee said. However to realize the greatest life-saving potential, the ambulance attendant of the future should be trained to the same level as lay assistants in emergency departments or medical corpsmen in combat areas; and, ideally he should be able, either independently or through voice communication with a physician, to carry out such procedures as tracheostomy, defibrillation, and mechanical external cardiac compression, the Committee said.

To attain these goals, the Committee said, accredited hospital training programs must be established that will produce professional ambulance attendants and emergency department assistants of the caliber of certified X-ray, laboratory, physical therapy, and other accredited medical technicians.

The ambulance attendant, it added, must be fully engaged in emergency care in an established career pattern that provides attractive compensation, prestige, and recognition deserving of his services as a member of the emergency-care team. Where the needs for ambulance service are low, so that he is not fully occupied, such as in small communities, he should be an employee of a hospital, where he can maintain his interest and proficiency as an assistant in the emergency department, intensive-care unit, or operating room, the Committee said.

* * *

The President's Committee on Mental Retardation reported that three-fourths of the nation's six million mentally retarded live in urban ghettos and rural slums and were unwanted, unplanned children.

The Committee's second annual report, entitled "The Edge of Change," dealt with the high incidence of retarded development among the poor, the shortage of manpower to serve the retarded, and the low quality of residential care available to most of them.

The Committee's recommendations called for:

—Education and health services for every child from birth.

—An insurance system to give parents a free choice in selecting needed services.

—Development of national accreditation standards for residential facilities for the retarded.

—Voluntary family-planning services for all Americans.

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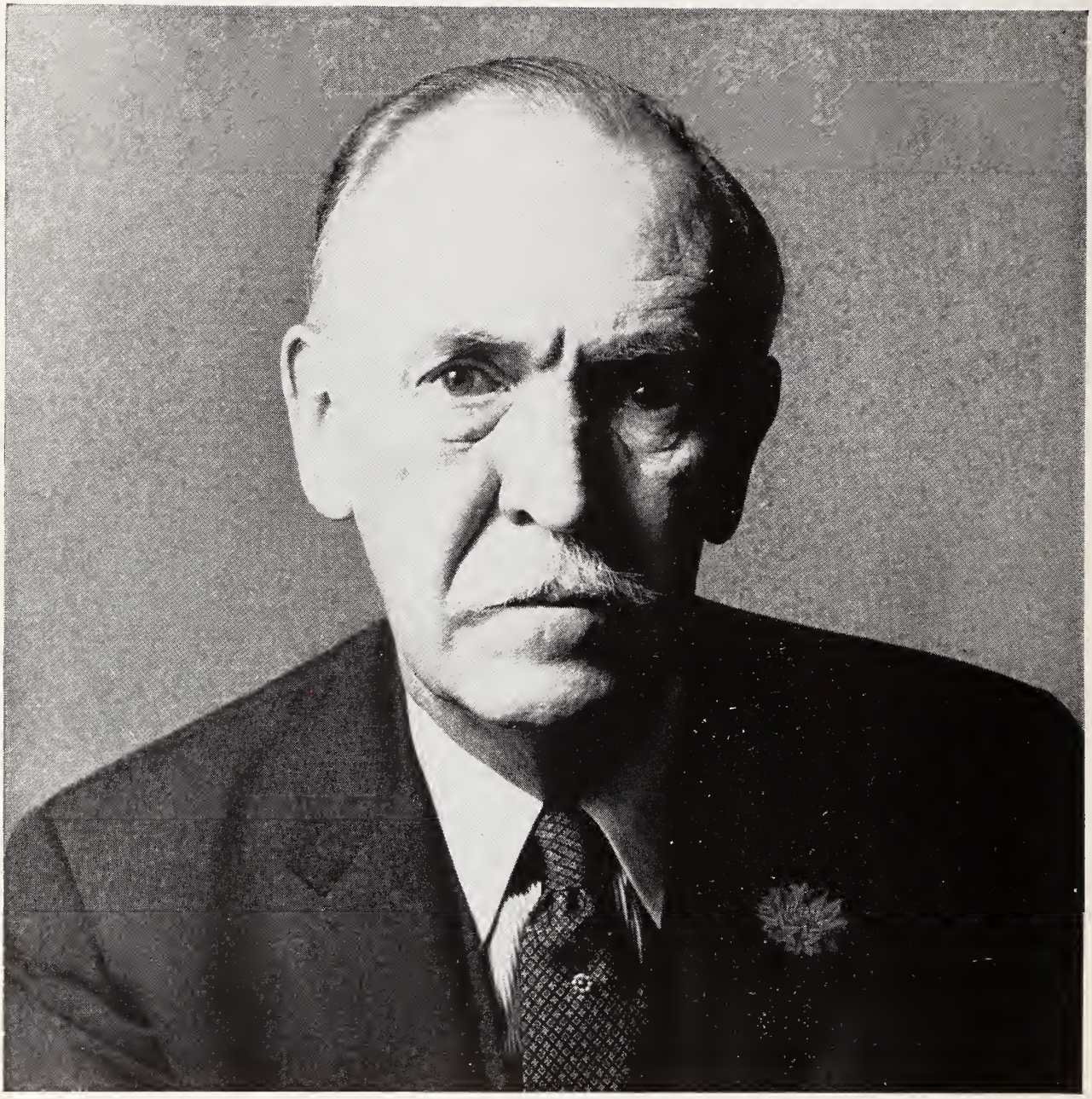
DILANTIN is useful in the treatment of grand mal epilepsy and certain other convulsive states. Its use will prevent or greatly reduce the incidence and severity of convulsive seizures in a substantial percentage of epileptic patients, without the hypnotic and narcotizing effects of many anticonvulsant drugs.
PRECAUTIONS: Periodic examination of the blood is advisable. Nystagmus in combination with diplopia and ataxia indicates dosage should be reduced. The possibility of toxic effects during pregnancy has not been explored. ADVERSE REACTIONS: Allergic phenomena such as polyarthropathy, fever, skin eruptions, and acute generalized morbilliform eruptions with or without fever. Rarely, dermatitis goes on to exfoliation with hepatitis, and further dosage is contraindicated. Gingival hypertrophy, hirsutism, and excessive motor activity are occasionally encountered. During initial treatment, side effects may include gastric distress, nausea, weight loss, nervousness, sleeplessness, feeling of unsteadiness. Macrocytosis, megaloblastic anemia, leukopenia, granulocytopenia, thrombocytopenia, pancytopenia, agranulocytosis, and aplastic anemia have been reported. Nystagmus, lymphadenopathy, lupus erythematosus, erythema multiforme (Stevens-Johnson syndrome), and a syndrome resembling infectious mononucleosis with jaundice have occurred.
DILANTIN is supplied in several forms including Kapseals® containing 0.1 Gm. and 0.03 Gm. diphenylhydantoin sodium.
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A patient of advancing years may appear to "have everything," but may well be in need—*medically*. You know the symptoms. He's tired most of the time. Though there's nothing wrong with him organically, he suffers from general malaise. Lassitude has become his way of life . . . vague aches and pains his major concern.

Such a patient has entered the "Mediatric Age"—that stage of his life in which he's an ideal candidate for MEDIATRIC. This preparation provides the anabolic benefits of gonadal steroids, plus a gentle mood uplift and the nutritional support he's apt to need. MEDIATRIC is intended to help keep him more alert and active, and relieve general malaise . . . to help restore that sense of physical and emotional well-being that the elderly *deserve* to enjoy.

The estrogen component in MEDIATRIC is PREMARIN® (conjugated estrogens-equine), the orally active, natural estrogen so widely prescribed for its physiologic and metabolic benefits. The combination of estrogen and *methyltestosterone* can help maintain anabolic balance to forestall premature degenerative changes related to estrogen deficiency. MEDIATRIC also supplies a small amount of *methamphetamine HCl* to provide a gentle mood uplift, and nutritional supplements specially selected to meet the needs of the aging.

CONTRAINDICATION: Carcinoma of the prostate, due to methyltestosterone component.
WARNING: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.
SIDE EFFECTS: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.
SUGGESTED DOSAGES: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.
In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.
SUPPLIED: No. 752—MEDIATRIC Tablets, in bottles of 100 and 1,000.
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No. 910—MEDIATRIC Liquid, in bottles of 16 fluidounces.

	Each MEDIATRIC Tablet or Capsule contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC Liquid contains:
Conjugated estrogens-equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
Pyridoxine HCl	3.0 mg.	—
Calcium pantothenate	20.0 mg.	—
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If aspirin doesn't help, move in with Tandearil.

The trial period is brief: 1 week. Try one tablet q.i.d. at first. Tandearil usually starts working within 3 to 4 days. When response occurs, as little as 1 or 2 tablets daily may hold back pain and stiffness, and increase joint motion.

On the next page is a summary of adverse reactions, contraindications, warning and precautions.

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It can help get his mind off his knee.

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For osteoarthritic knees, spines, shoulders, hips, etc.:

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oxyphenbutazone

Tandearil, oxyphenbutazone:
For brief summary see next page.

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Tandearil®
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: This drug is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy, and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response.

Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

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COMING MEETINGS

IN STATE

Nov. 4-6 **Postgraduate Course on Religion and Medicine,** U. of I. College of Medicine, Iowa City.

Nov. 14-16 **Postgraduate Course in Orthopedics,** U. of I. College of Medicine, Iowa City.

Dec. 5-6 **Postgraduate Course on Cardiac and Respiratory Disease,** U. of I. College of Medicine, Iowa City.

CONTINENTAL U. S.

Nov. 6-9 **Conference on Respiratory Therapy,** Statler-Hilton Hotel, Boston.

Nov. 7-9 **Second Annual Postgraduate Conference on Today's Hospital Problems; An Interdisciplinary Approach sponsored by Mound Park Hospital Foundation and University of Florida,** Tides Hotel and Bath Club, Redington Beach, Florida.

Nov. 8-9 **Surgery Conference sponsored by University of Nebraska College of Medicine,** Lincoln.

Nov. 10-15 **Fourteenth Annual Meeting, American Association for Inhalation Therapy,** Houston.

Nov. 11-13 **Postgraduate Course on Gastroenterology,** University of California College of Medicine, Los Angeles.

Nov. 11-14 **Newer Perspectives in Gastroenterology sponsored by University of California, Irvine,** Newporter Inn, Newport Beach, California.

Nov. 11-14 **Postgraduate Course on Internal Medicine, sponsored by University of Kansas School of Medicine,** Kansas City, Kansas.

Nov. 11-15 **96th Annual Meeting, American Public Health Association,** Cobo Hall, Detroit.

Nov. 13 **Arthritis Symposium sponsored by University of Colorado School of Medicine,** Denver.

Nov. 13-16 **Forty-seventh Annual Convention of National Easter Seal Society for Crippled Children and Adults,** Sheraton-Boston Hotel, Boston.

Nov. 14-16 **Musculoskeletal Diseases for General Physician,** University of Colorado School of Medicine, Denver.

Nov. 15-16 **Perinatal Cardiac and Respiratory Emergencies, sponsored by University of Nebraska College of Medicine,** Children's Hospital, Denver.

Nov. 18-21 **Symposium on Basic Mechanisms of the Epilepsies, sponsored by Public Health Service Advisory Committee on the Epilepsies and National Institute of Neurological Diseases and Blindness,** Broadmoor Hotel, Colorado Springs.

Nov. 18-22 **Stress and Disease: Relationship of Psychologic and Social Forces in Pathogenic Mechanisms,** University of Oklahoma Medical Center, Oklahoma City.

Nov. 20-22 **1968 Annual Conference of National Socicty for Prevention of Blindness, Inc.,** Roosevelt Hotel, New York City.

Nov. 20-23 **Western Surgical Association,** Drake Hotel, Chicago.

Nov. 21-22 **Postgraduate Course on Central Nervous System as Mirror of Systemic Disease, sponsored by University of Nebraska Medical Center,** Omaha.

Nov. 21-26 **American Heart Association,** American Hotel, Bal Harbour, Florida.

Dec. 1 **10th AMA National Conference on Medical Aspects of Sports,** Hotel Deauville, Miami Beach.

Dec. 1 **1968 Annual Meeting, American College of Nutrition,** Hilton Plaza Hotel, Miami Beach.

Dec. 1-4 **Clinical Meeting, American Medical Association,** Miami.

Dec. 1-6 **Radiological Society of North America, Inc.,** Palmer House, Chicago.

Dec. 4-6 **Academy of Psychosomatic Medicine,** Eden Roc Hotel, Miami Beach.

Dec. 6-7 **New Mexico Regional Meeting, American College of Physicians,** Sheraton-Western Skies Motel, Albuquerque.

Dec. 7-12 **27th Annual Meeting, American Academy of Dermatology,** Palmer House, Chicago.

Dec. 9-11 **Southern Surgical Association,** Boca Raton Hotel and Club, Boca Raton, Florida.

Dec. 10-14 **American Academy for Cerebral Palsy,** Americana Hotel, Bal Harbour, Florida.

Dec. 14 **Arizona Regional Meeting, American College of Physicians,** Phoenix.

Dec. 16-18 **Twenty-second Postgraduate Assembly in Anesthesiology, New York State Society of Anesthesiologists,** New York City.

ABROAD

Nov. 5-8 **Eighth Clinical Congress of Israel Surgical Society,** Jerusalem.

Dec. 1-7 **12th International Congress of Pediatrics,** Mexico City.

Dec. 7-9 **First National Conference on Infectious Diseases,** Bombay, India.

Course in Intensive Coronary Care

An opportunity for six Iowa physicians to improve their acquaintance with aspects of intensive coronary care management will be provided by a postgraduate course offered December 2-6 at the University of Iowa.

It was arranged by Dr. Donald L. Warkentin, an associate professor of medicine in the College of Medicine, and is jointly sponsored by the Iowa Regional Medical Program and the University's Colleges of Medicine and Nursing.

Seven staff members from the College of Medicine and one from the College of Nursing will comprise the faculty. This course will offer an intensive review of anatomy, physiology, and electrocardiography; provide instruction in the techniques of pacing, catheter placement, arterial cannulation, and monitoring; and will examine the organizational aspects of the coronary care unit and nurse-physician relationships in the unit.

Dr. Warkentin anticipates that the five-day course will be repeated two or three times during the coming year and will welcome inquiries as to later enrollment as well as applications for enrollment in the initial course.

It's almost as if you were there to give an injection of penicillin



V-Cillin K®, Pediatric dependable oral penicillin therapy

Potassium Phenoxymethyl Penicillin

Description: V-Cillin K, the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly), combines acid stability with immediate solubility and rapid absorption. Higher, more rapid serum levels are obtained than with equal oral doses of penicillin G.

Indications: Streptococcus, pneumococcus, and gonococcus infections; infections caused by sensitive strains of staphylococci; prophylaxis of streptococcus infections in patients with a history of rheumatic fever; and prevention of bacterial endocarditis after tonsillectomy and tooth extraction in patients with a history of rheumatic fever or congenital heart disease.

Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: Usual dosage range, 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, 50 mg. per Kg. per day divided into three doses.

See package literature for detailed dosage instructions for prophylaxis of streptococcus infections, surgery, gonorrhea, and severe infections.

How Supplied: Tablets V-Cillin K® (Potassium Phenoxymethyl Penicillin Tablets, U.S.P.), 125 mg. (200,000 units), 250 mg. (400,000 units), and 500 mg. (800,000 units).

V-Cillin K® (potassium phenoxymethyl penicillin, Lilly), Pediatric, for Oral Solution, 125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. of solution (approximately one teaspoonful). [042567A] 800198

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A Study of Iowa Medical Physicians

SECTION 1—The Number and Distribution of Doctors of Medicine

JOHN C. MacQUEEN, M.D.
Iowa City

THIS REPORT IS PRESENTED to alert the Iowa medical community to the fact that there are severe inequalities in the distribution of physicians practicing in Iowa.

A great deal has been written concerning the causes of this situation. Many reports and plans have been developed that propose various solutions for these problems. This report makes no effort to discuss the causes or to present solutions for the problems that are identified.

The number and distribution of physicians needed to provide medical care for the citizens of Iowa is directly related to the population of the state and the distribution of that population. This report correlates information obtained by a study of the changes that have occurred in the population of Iowa[4] in addition to data concerning Iowa physicians collected from various editions of the AMERICAN MEDICAL DIRECTORY.[1]

In this report the population/physician ratio has been used as an index of the availability of medical care. It is apparent that it is impossible to determine the exact number of people each physician can serve. However, many careful studies have been conducted in an effort to establish a dependable index.[2, 3, 5, 6] On the basis of these studies, there is a general agreement that a ratio of 1,000 people to one physician makes medical care readily available. When the ratio exceeds 1,500 people to one physician, the availability of medical care is uncertain, and when the ratio exceeds a population of 2,000 people to one physician, the availability of health care is inadequate. This index has many shortcomings, but it does serve as a reasonable tool in evaluating the availability of health care, and it is generally accepted in health reporting and health planning.

The major implications of the population/physician ratios calculated in Table 1 are significant in emphasizing the decreasing numbers of physicians practicing in Iowa.

STUDY METHODS

It would seem that there ought to be no problem in stating the number of practicing physicians in Iowa. However, there was a major difficulty. For example, the limitations of a definition of a "practicing physician" permits varied conclusions. The use of different definitions by various authors resulted in dissimilar methodology, some misinterpretations and the reporting of divergent statistics.

The usual figures that one sees represent the

The usual figure that one sees represents the state. This number includes physicians in retirement, those working in State Hospitals,

TABLE 1

NUMBER OF PRACTICING PHYSICIANS* AND POPULATION/PHYSICIAN RATIOS IN IOWA BY DECADE, 1910-1960

Year	Population of Iowa	Number of Physicians	Population/ Physician Ratios
1910	2,224,771	3,597	619/1
1920	2,403,630	3,470	694/1
1930	2,470,939	2,982	828/1
1940	2,538,268	2,868	884/1
1950	2,621,073	2,588	1,012/1
1960	2,757,537	2,330	1,182/1

* Physicians with M.D. degrees in private practice.

* Data collected and processed by Ann Proksch, programmer, Department of Pediatrics, University Hospitals, Iowa City.

TABLE 2

MEDICAL PHYSICIAN COVERAGE OF URBAN POPULATION IN IOWA, 1910-1960

Year	Urban Population	Urban Physicians	Population To Physician Ratio
1910	680,000	1,625	1/418
1920	875,000	1,861	1/470
1930	979,000	1,840	1/532
1940	1,084,000	1,828	1/594
1950	1,246,000	1,869	1/655
1960	1,463,000	1,901	1/770

those in administrative positions in both state and federal health departments, and those serving as house officers during their periods of training. Table 1 reflects that uncritical definition. The information in it thus suggests that the availability of physicians in Iowa is quite adequate.

However, the purpose of this study is to determine the number of physicians in private practice who are available to provide direct medical care. To obtain these figures, the following definition is proposed and is used in this study.

"Practicing physician," for purposes of these tables, is defined as any physician listed in the DIRECTORY OF THE AMERICAN MEDICAL ASSOCIATION except those listed as "retired," "not in practice," "intern," or "resident."

In cases where more than one specialty was listed for an Iowa graduate, only the first one was used. No counties or cities were eliminated.

NUMBER AND DISTRIBUTION

It is apparent that the population of Iowa has not increased as have the populations of many other states. During the period of time covered, 1910-1960, the population growth was minimal, but the number of physicians practicing in Iowa remarkably decreased. As a result, the population/physician ratio became less favorable.

The population/physician changes that occurred between 1940 and 1960 probably have more relevance because they are years during which many of Iowa's current physicians were already in practice. During that period of time, there was a decrease in the number of physicians practicing in Iowa. In fact, there were 538 less physicians practicing in 1960 than were practicing in 1940 (Table 1). This change in the number of practicing physicians dramatically and unfavorably changed the population/physician ratio during the past two decades.

TABLE 3

POPULATION/PHYSICIAN RATIOS FOR IOWA IN COUNTIES RANKED BY DEGREES OF RURALITY, BY DECADE, 1910-1960

Proportion of Population That Is Rural in Respective Decade	Population/Physician Ratio 1910	1920	1930	1940	1950	1960
80% or more	673	805	1,019	1,075	1,399	1,905
60-79	595	706	895	966	1,177	1,573
40-59	650	621	684	727	809	1,226
Less than 40	534	606	730	802	909	950

During the period 1910-1960, and particularly during the period 1940-1960, many Iowans elected to leave rural areas and move to Iowa urban areas. This change in population is recorded in Figure 1. During that period of time Iowa changed from a state with a wide and evenly dispersed, predominantly rural population, to a semi-rural state with easily identified trade areas with population centers (Figure 2).

During the same period of time, when many Iowans were moving from rural areas to urban areas, many Iowa physicians elected to move

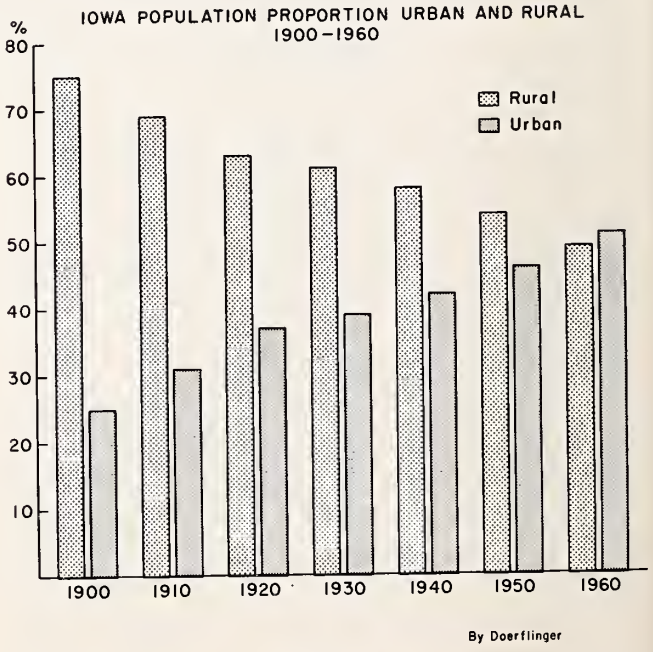


Figure 1

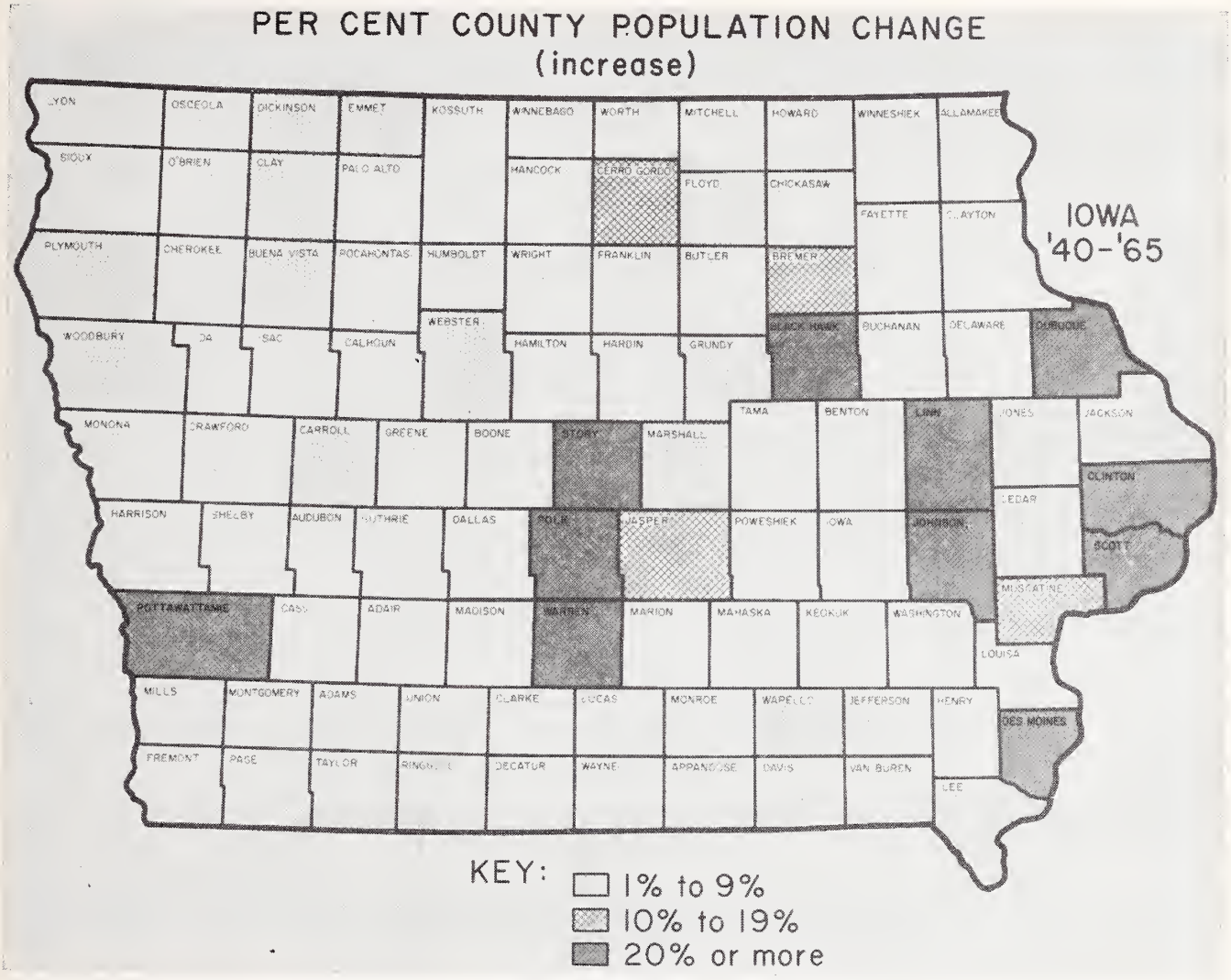


Figure 2

to the larger towns and cities, or if they were recent graduates, they chose to enter practice in major towns and cities (Tables 2 and 3).

Although the quality and amount of effective medical care was limited, a favorable population/physician ratio existed in 1910 (Figure 3). From 1910 through 1940, there was a physician in almost every town and hamlet. This accessible medical care created an expectation on the part of Iowa citizens that physicians would be geographically nearby. This expectation remains, to a greater or lesser degree, in spite of evidence that greater mobility and modern transportation have made good medical care available to rural families.

Soon after 1940, the migration of physicians from rural areas to towns and cities began (Figure 4), and by 1950 (Figure 5), some counties no longer had the numbers of physicians they needed in order to provide needed medical care. By 1960 (Figure 6), many counties in Iowa had population/physician ratios that justified community concern. This trend in distribution has continued, and the present situation is critical in several areas of the State (Figure 7).

During the past 15 years, essentially none of the young men who have entered practice have elected to practice general medicine in a rural area. In 1960 many rural physicians were 60 years of age or older (Table 4); so on the basis of age alone, a natural attrition of rural physicians can be anticipated. With the data that projects the future population for each Iowa county, and the availability of physicians

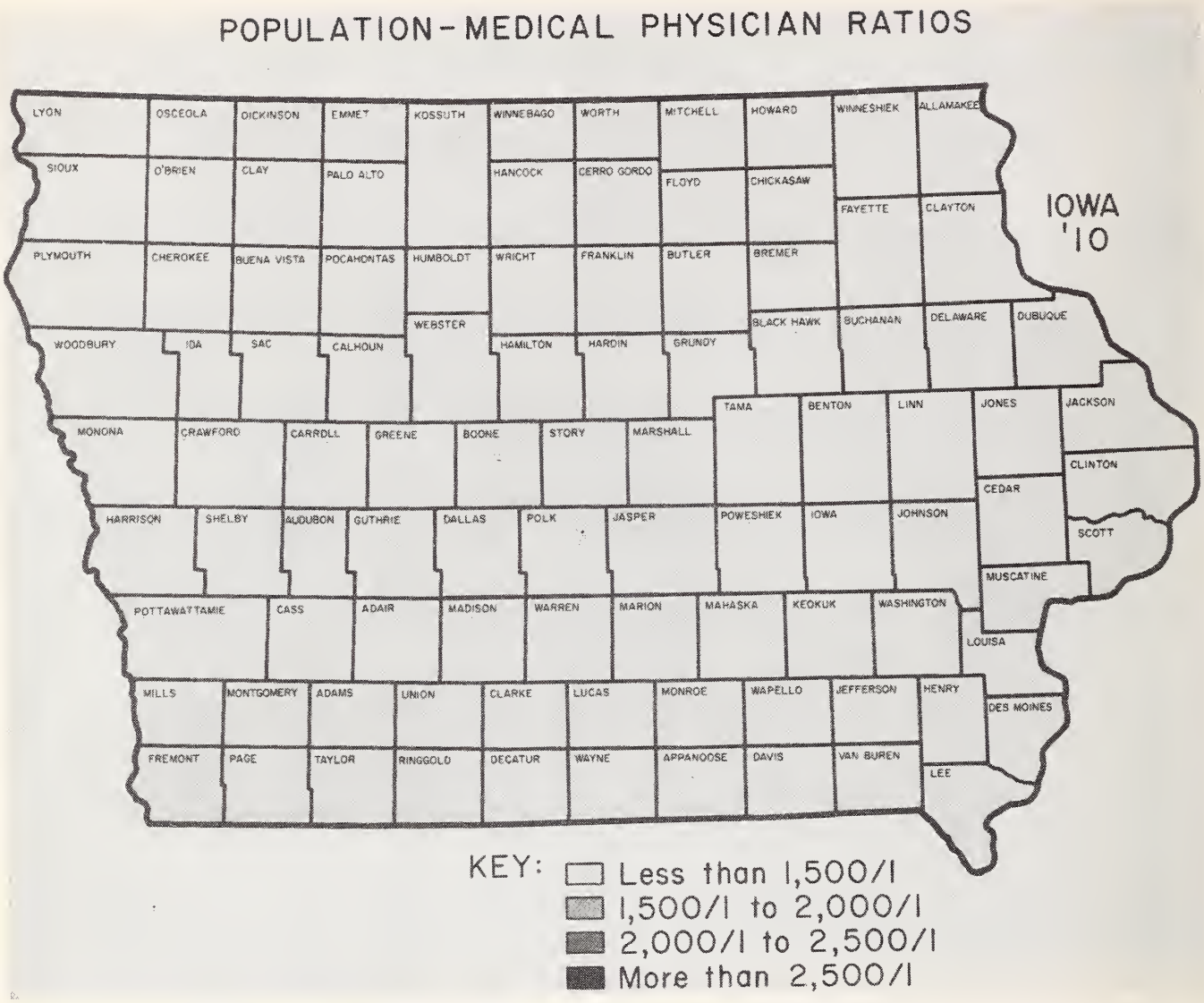


Figure 3

TABLE 4

PHYSICIANS AGE 60 OR OLDER IN RURAL VILLAGES IN IOWA BY DECADE, 1910-1960

Population of Village During Respective Decade	Percentage of Physicians Age 60 or Older					
	1910	1920	1930	1940	1950	1960
Under 500	8	18	34	54	64	48
500-999	11	18	30	45	46	36
1000-1499	13	23	26	40	45	25
1500-2500	15	24	36	42	41	25

practicing in rural areas, the future of rural Iowa medicine can be predicted with reasonable reliability (Figure 8).

The geographic imbalance between population and physicians is of major consequence in rural Iowa. However, the medical manpower situation in Iowa's towns and cities has not been adversely affected. It does seem that a sufficient number of young physicians, both generalists and specialists, have elected to practice in towns and cities where good diagnostic services, good laboratory services, good hospital facilities and referral patterns were available (Table 2).

SUMMARY

It is proposed that the same naturally occurring economic and social factors that have altered the population and industrial patterns in Iowa during the last 20 years, have also altered and will continue to alter the medical care pattern in Iowa. It is realized that population projections will be subject to increased inaccuracy, but the magnitude of the imbalance

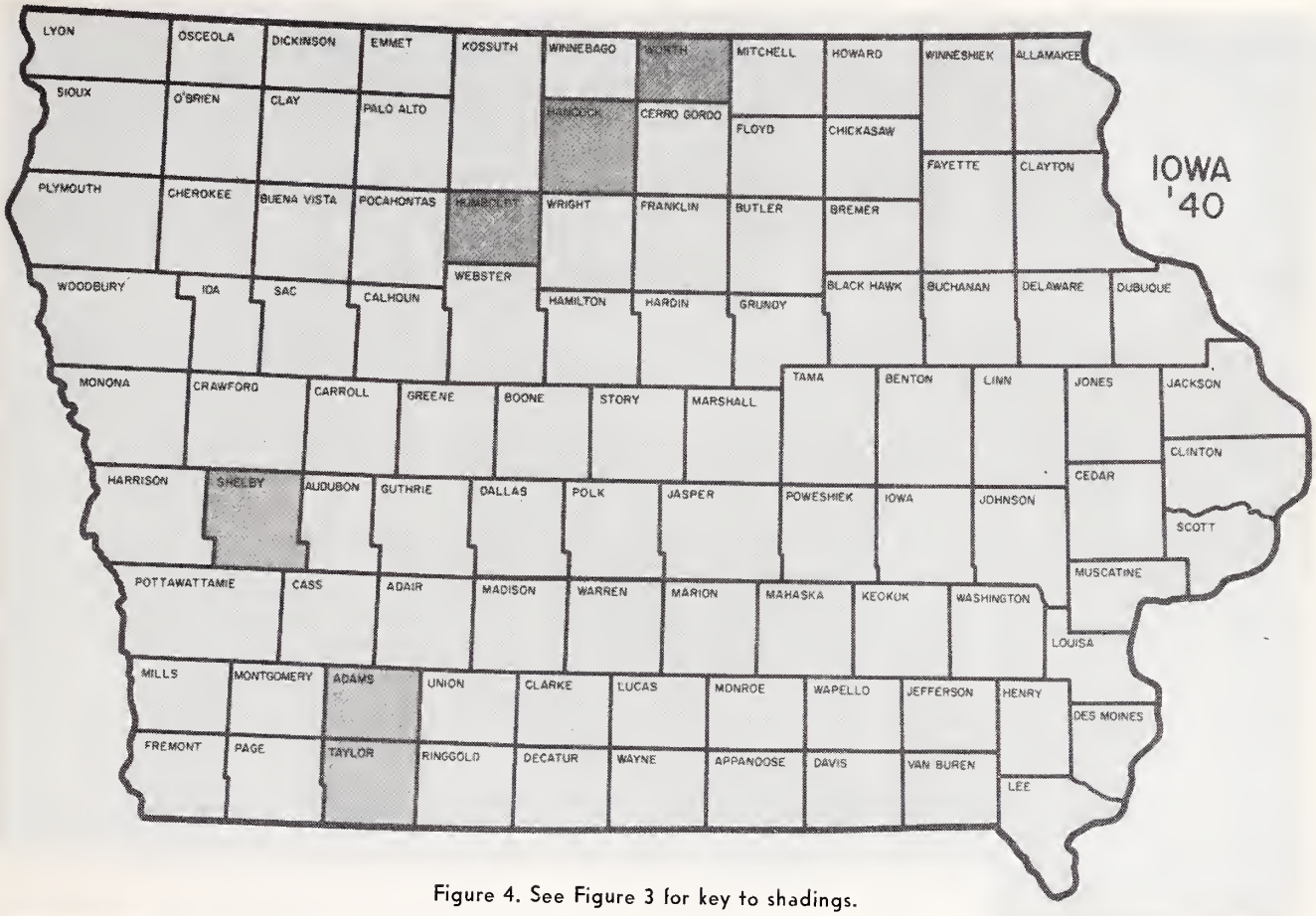


Figure 4. See Figure 3 for key to shadings.

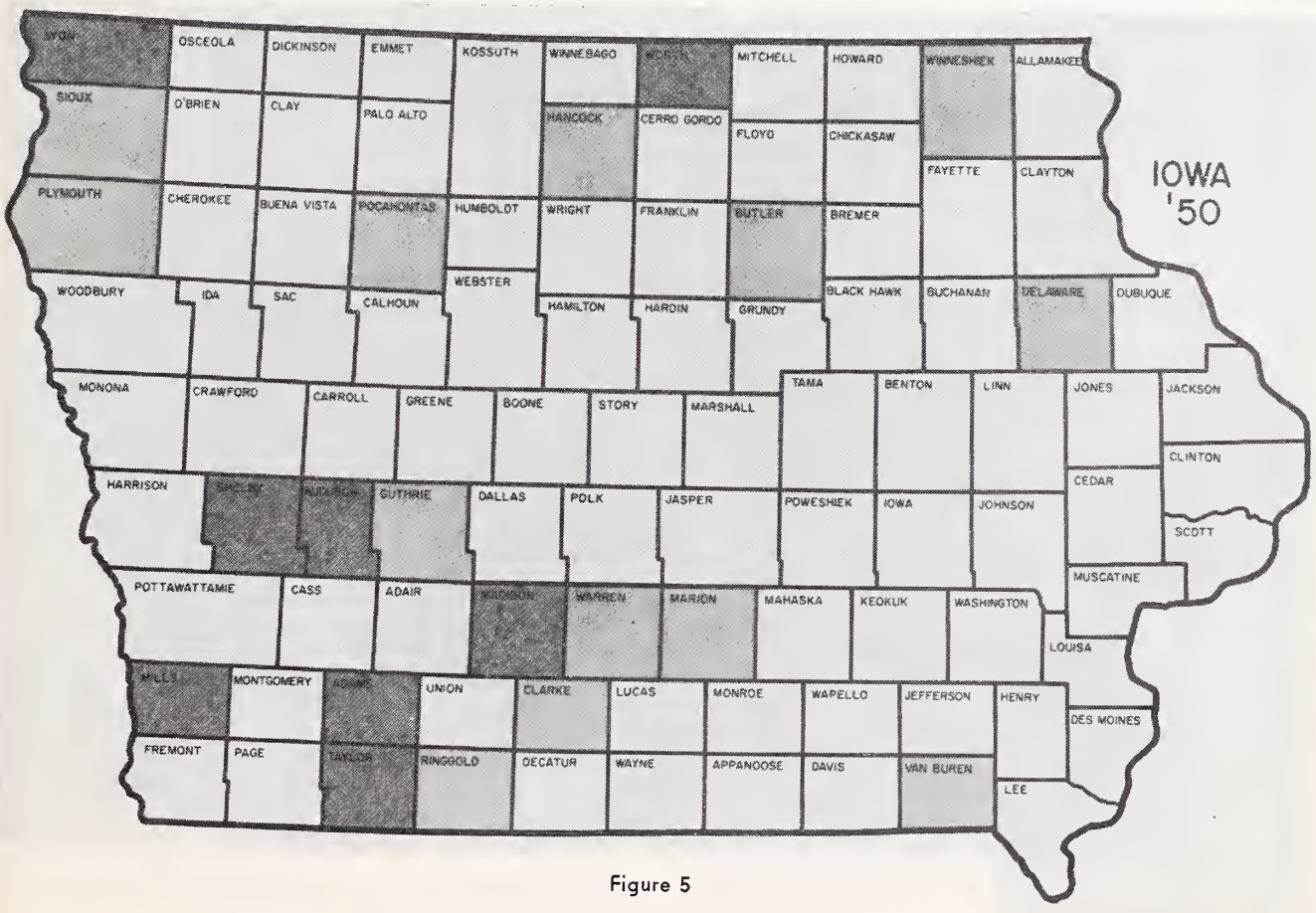


Figure 5

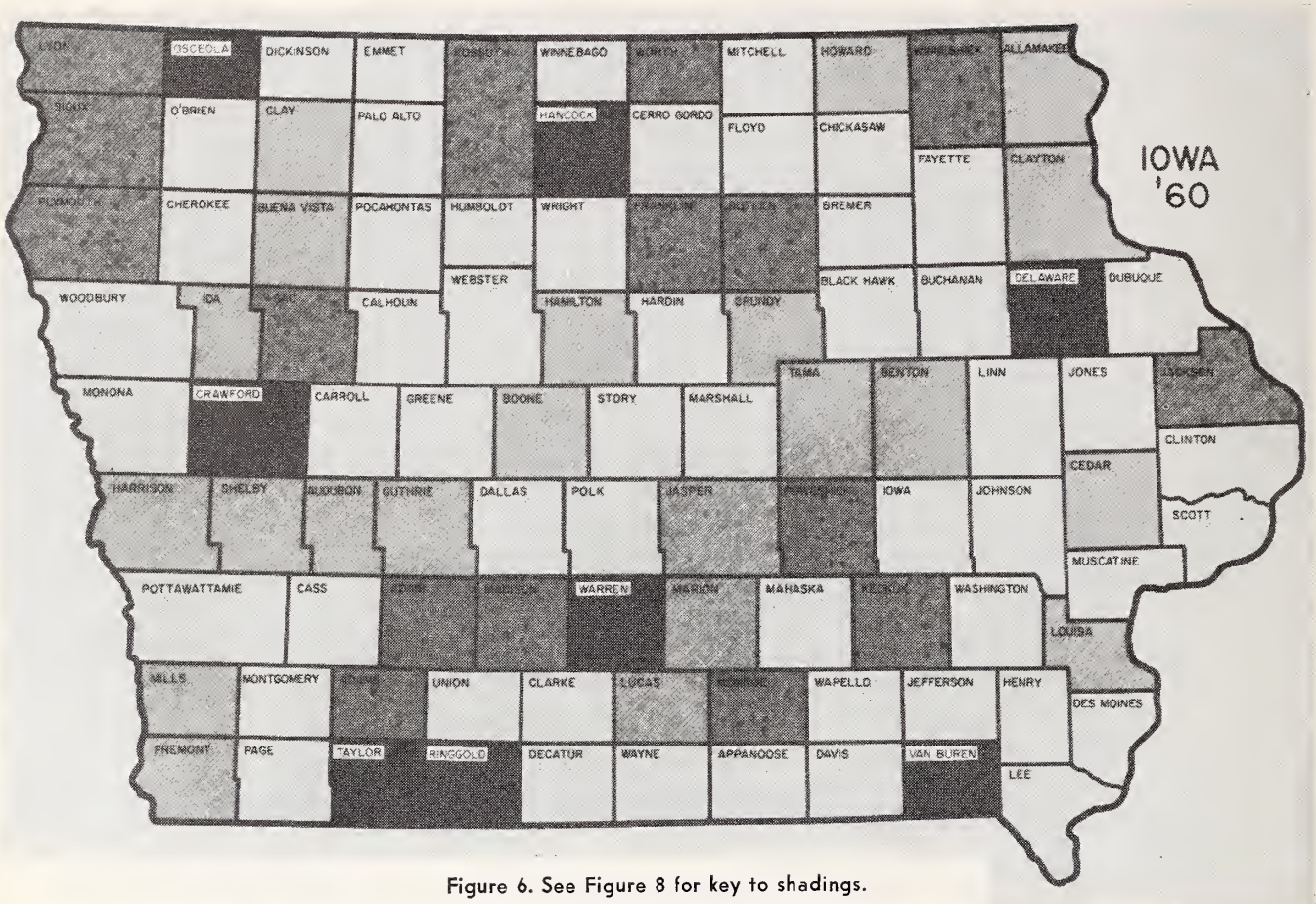


Figure 6. See Figure 8 for key to shadings.

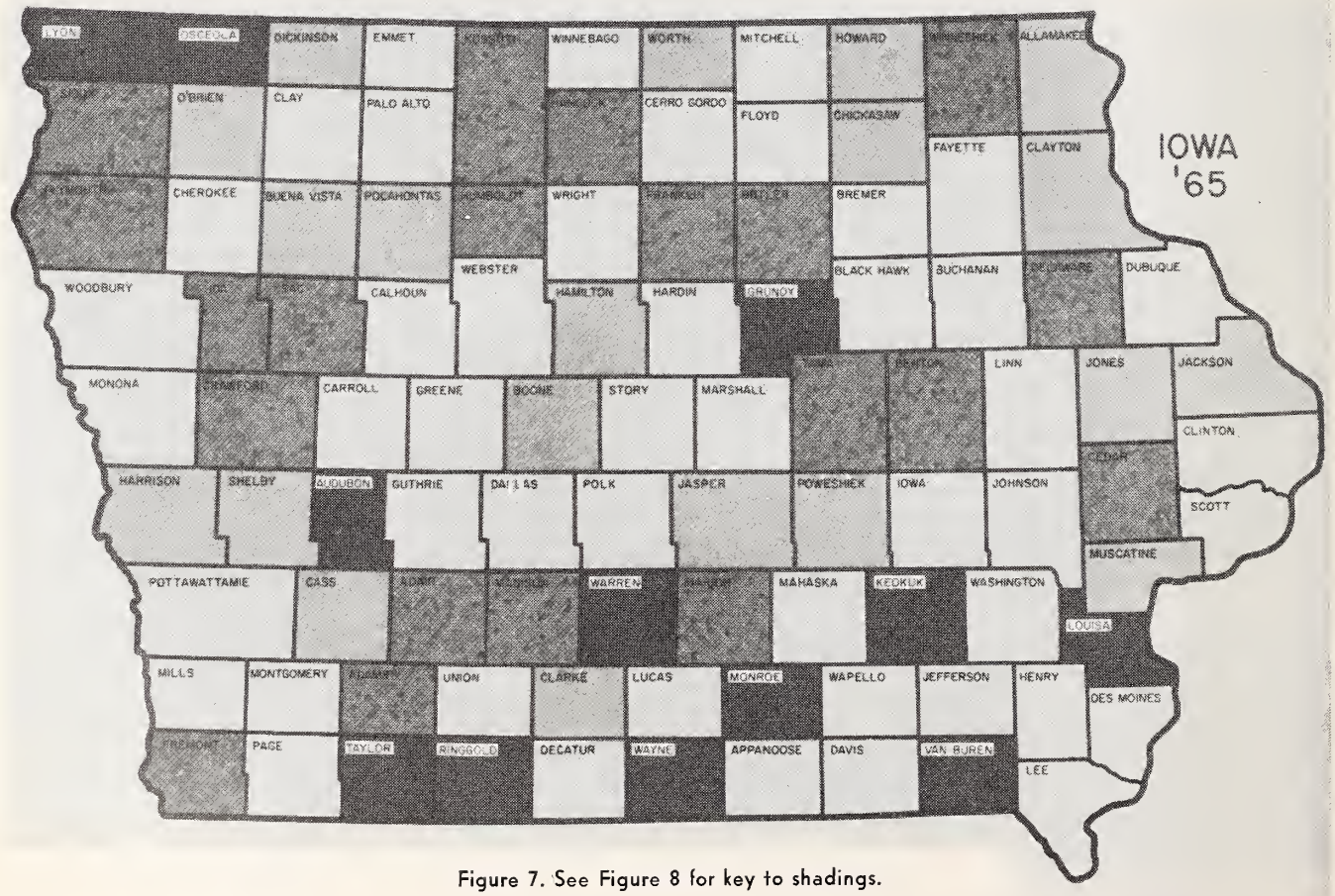


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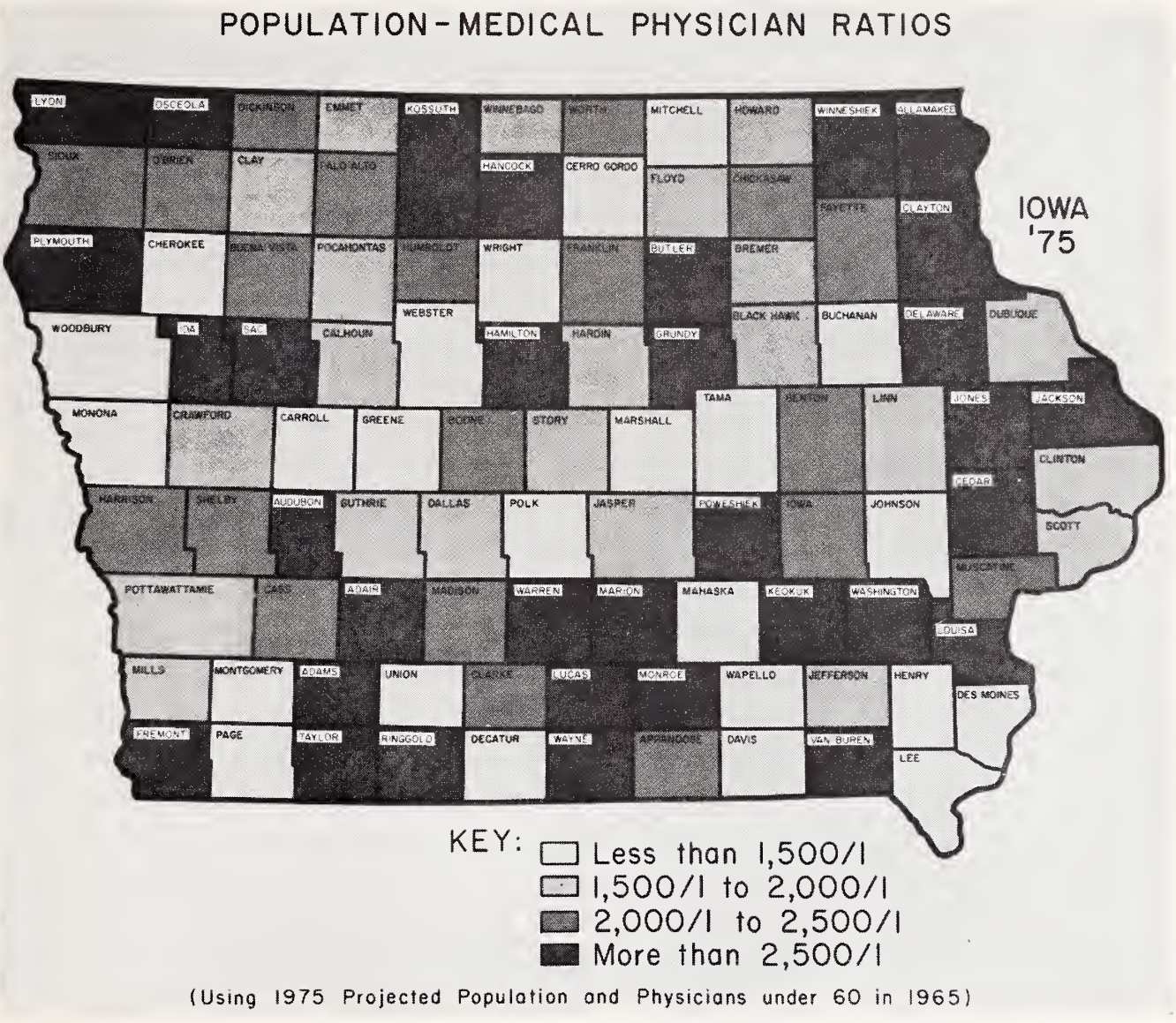


Figure 8

in the rural population/physician ratio calculated on the projected information, indicates that in the future most of the medical care for Iowans will be provided in the population centers of trade areas.

The information reported in this study indicates that the problems of providing medical care in Iowa are primarily problems of providing medical care to *rural* Iowa.

It behooves all those responsible for the provision of health care in Iowa to recognize the current and impending problems in rural health-medical care in the State and to plan to insure modern medical care for that segment of the population.

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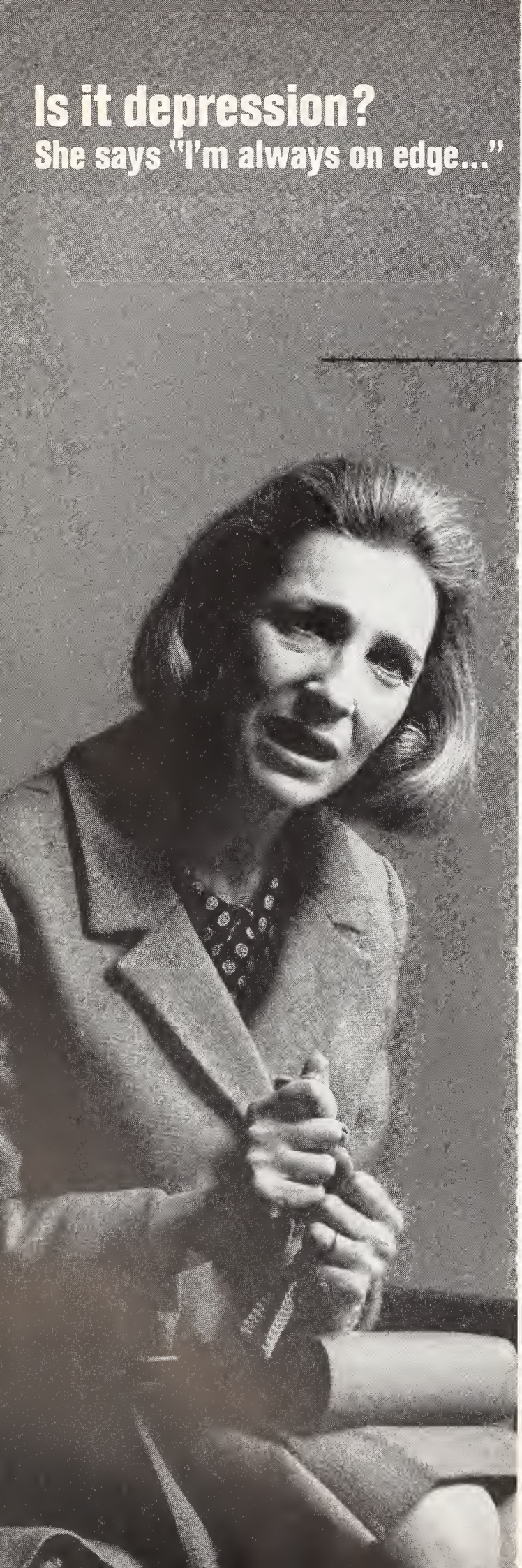
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WHERE TODAY'S THEORY IS TOMORROW'S THERAPY

Scientific Articles

Risk Factors in Coronary Artery Disease

DONALD L. WARKENTIN, M.D.
Iowa City

THE TITLE OF THIS PRESENTATION is a "ho-hum" one. It generates comments like "Not that again." An evangelist whose perennial topic is SIN has several options to overcome a "ho-hum" attitude. He can paint a picture of SIN in all its most lurid details, and can gain no small amount of attention by that means. Similarly he can paint a titillating picture of the judgment to come. On the other hand he may exercise the option of outlining a remedy for the situation. What I shall do with my topic will probably be a little bit of each. I may emphasize some lurid details to gain your attention, but primarily I'd like to say a few things in three different areas: (1) I'd like to identify the risk factors for you, or if you prefer, reidentify them; (2) I'd like to outline what I think is a reasonable approach to the evaluation of the coronary-prone man; and then, (3) I'd like to say a few words about a specific attack upon the problem of coronary artery disease.

UNEQUIVOCAL RISK FACTORS

If we talk about the risk factors, we can divide them into two groups: those which are unequivocal risk factors, and those which are possible or equivocal risk factors. Most of these are no secret to any of you. I'd like to start with the commonest one, hypercholesterolemia or hyperlipidemia. The main interest in this as a risk factor lies in the fact that cholesterol is the main component of the atherosclerotic plaque. Both retrospective and prospective studies—i.e., epidemiologic studies—have shown that there is an increased risk of coronary artery disease for patients who have hypercholesterolemia or hyperlipidemia.

Probably the best known of the epidemiologic studies is the Framingham Study, conducted in Framingham, Massachusetts. The data from this study show that there is approximately a three times greater risk of developing overt coronary disease for people who have serum cholesterol excess. There is a strong positive correlation between rising cholesterol levels and coronary artery disease.

Another study is the one from Albany, New York. The data are reported a little differently, but they really say much the same thing. The Albany Study shows that if the cholesterol is greater than 275 mg. per cent, the probability of a person's contracting coronary artery disease rises rather steeply after the age of 40 years. Again there is a significant relationship between the level of cholesterol and the development of coronary artery disease.

I think it is important to remember that the statistics which we quote here are applicable only to groups. They really don't hold in individual cases. That is, if you have a patient

Dr. Warkentin is a U. of I. assistant professor of internal medicine, and he made this presentation in Iowa City on December 1, 1967, at a cardiovascular symposium sponsored by the Iowa Heart Association and other organizations.

with a cholesterol of 275 mg. per cent you really cannot predict, on the basis of these data, that he, in particular, has a three or four times greater likelihood of contracting coronary disease than the normal person. On the other hand, these studies have given us enough information to permit us to say that for hypercholesterolemics as a group the statistical correlation is highly significant.

What about the other lipids in the serum, primarily the serum triglycerides? These include the chylomicrons which usually are of alimentary origin and the alpha and beta lipoproteins. The interest in these triglycerides has been stimulated during the past few years because investigators have shown that certain people, particularly after some types of carbohydrate intake, have marked increases in their serum triglycerides. Fredrickson and his co-workers at the National Institutes of Health have shown from their studies that there is no clear-cut correlation between the level of serum triglycerides and coronary artery disease unless the levels become excessively elevated. We don't know what influence the carbohydrates have upon triglycerides, and this is still an open question. People who have a serum optical density that has been altered because of serum lactescence or increased chylomicrons may be at increased risk of contracting coronary artery disease.

The second of the unequivocal risk factors is hypertension. People have known for a long time that elevations in systemic blood pressure cause an accelerated progression of atherosclerosis. The same is true of elevations in pulmonary artery pressure. It is unclear whether this is due to a sort of percolation effect of the lipids in the serum itself, so that with an increased pressure they are, so to speak, driven into the intima of the arteries. It is true that in people who have atherosclerosis of the pulmonary artery there is marked pulmonary hypertension.

The Albany Study reveals what happens to people who have elevated blood pressure. If one's blood pressure is elevated over 160/95 mm. Hg. he has a significantly increased risk of developing coronary artery disease when compared with the normal individual or with the total population. The risk is somewhere between three and five times normal, if the hypertensive condition persists for several years, and if the systolic increase is correlated with an increase in the diastolic pressure.

The third risk factor—an unequivocal one, I think—has to do with cigarette smoking. Probably the outstanding characteristic of the *prospective* epidemiologic study is that smoking has been shown to cause an increased incidence of coronary artery disease. Combined data from the Albany and Framingham studies show that the risk is three to five times normal in men who smoke more than 20 cigarettes per day, i.e., a package or more of cigarettes per day. With regard to women smokers all the data aren't in, but preliminary figures lead us to believe there is not going to be much difference between women smokers and men smokers in this regard.

Data from the Framingham Study indicate a likelihood that coronary artery disease will develop in smokers as opposed to non-smokers. There is nearly twice the risk for the smoker as compared with the non-smoker. The Albany Study has shown much the same thing. Again, more than 20 cigarettes per day results in a highly increased probability of coronary artery disease. What is the mechanism involved in this? I don't think anybody really knows. It is true that smoking causes an increase in the death rate from all causes, and not just from coronary artery disease. Some people have speculated that perhaps nicotine has an effect on platelet stickiness, and that there is an abnormal coagulation process which occurs in people who smoke a great deal. I don't think we are certain about that. More work needs to be done before we can really nail this down.

A fourth risk factor, known for a long time, is diabetes mellitus. The risk of coronary disease in people who have abnormal carbohydrate tolerance is two to four times normal. Frank diabetes mellitus may not be present in some of these people. Because of changing concepts, it is becoming more difficult to define normal carbohydrate tolerance. Some people say that normality is characterized by a certain type of tolerance curve. Other people insist upon a certain postprandial or fasting blood sugar level as a requisite for diabetes mellitus or abnormal glucose tolerance. I don't think there is any question that an abnormal carbohydrate tolerance produces an increased risk.

It may not be the diabetes mellitus that does it. There may be a hereditary factor, but we are not yet certain.

My mentioning the possible influence of heredity brings up one of the other risk factors that is unequivocal. If there is a strong family history of coronary heart disease, there is an increased risk that an individual will develop it. The degree of that risk is unknown. It is also unknown whether the increased lipids in such patients are the predisposing factors, or whether some other inheritable trait is crucial. If both parents—and I emphasize that we are talking about *both* parents—have significant family histories of premature coronary artery disease, the risk of their child's developing coronary artery disease is rather high. If neither parent has such a family history, then the child's risk is about the same as for the total population.

Another unequivocal risk factor is one of the problems that many Americans face today—overweight or obesity. Insurance company actuarial tables show that obese persons have increased death rates from coronary heart disease. The increased rate is a function of the degree of obesity. If the body weight is in excess of 120 per cent of the so-called "ideal weight," the increased risk may be anywhere from 8 to 37 per cent. Likewise, if a person is skinny or indeed carries less than 90 per cent of his ideal weight, he has a decreased risk of developing coronary artery disease when compared with the total population.

Another unequivocal risk factor is the presence of electrocardiographic abnormalities in apparently healthy people. A Chicago study which Dr. Jeremiah Stamler carried out showed that 10 per cent of men between the ages of 40 and 59—apparently normal men—had abnormal electrocardiograms, and that the incidence of coronary artery disease was increased in those men. If we stress men with normal EKG's, a certain percentage of them will develop abnormalities—say on a Master's test—and if we stress them still further by submaximal or maximal exercise on a treadmill, a higher percentage of them will show abnormalities. These individuals in the supposedly normal male population are at high risk. Their risk is somewhere between three and eight times normal.

EQUIVOCAL RISK FACTORS

There are some equivocal factors. One of these is hyperuricemia. Some interest has been elicited by the fact that people who have elevated uric acid levels may also have a higher than average susceptibility to coronary artery disease. So far, there is not enough information to support a decision one way or the other.

Sedentary living has been blamed for much of America's trouble with the coronary-disease problem, and it is true that British studies show that sedentary people have twice the risk of developing coronary artery disease, when compared with active people. However American studies employing the same techniques have been less conclusive. The differences are not nearly so significant as they are in the British studies. Thus we still don't know whether sedentary living has an effect or not.

The question of multiple risk factors arises, of course. Suppose that a person has more than one of the unequivocal risk factors. What is his risk of getting coronary disease? It is very difficult to get suitable information of this type. If one has all three abnormalities—e.g., a cholesterol higher than 250 mg per cent, a systolic blood pressure above 160 mm Hg, and a cigarette consumption in excess of a pack per day—he has a tremendously increased risk of developing coronary artery disease, probably in the range of ten times normal.

Again let me emphasize that I don't think one can take these statistics and apply them to an individual patient. I do think they are rather frightening and—if you will permit me to say so—lurid, if you take them as a group of statistics.

EVALUATING CORONARY PRONENESS

Now I'd like to spend a few moments on what I think is a reasonable approach to the evaluation of a man who may be coronary prone. When one of us sees a patient in his office there are usually many things that pop out during the history-taking, or come to light during the physical examination and the basic laboratory work, that suggest the problem of incipient coronary artery disease. Starting with the history, the first significant question may relate to whether or not he smokes. The answer isn't usually very difficult to get, for few

people tend to dissemble or refuse to answer that question. Second, is there a family history of untimely or premature coronary heart disease? Has one or have both of the patient's parents died suddenly, or is there any other evidence of untimely coronary disease in the patient's forebearers. Third, is there a history of diabetes mellitus, or some other form of carbohydrate intolerance? All these pieces of information, I think, can be gleaned from the history.

When it comes to the physical examination, most of us, of course, take blood pressures routinely. If there is an elevation in the systolic, or more particularly in the diastolic pressure, it should "raise a red flag." This is particularly true when there is sustained diastolic hypertension. Next, in the physical examination there may be evidence of increased lipids in the blood—for example xanthelasma or arcus senilis. The latter may or may not be associated with increased lipids in the blood. The patient's nutritional status is easily discerned during the physical examination. I think it is perhaps kinder to call it "nutritional status," rather than "obesity." If the patient is more than 10 per cent overweight, or is 20 per cent overweight, this again ought to "raise a red flag," insofar as our evaluation is concerned. Another thing we ought to get from the physical examination is whether the patient has diabetic retinopathy or not. Sometimes berry aneurysms occur in the retina before any other marked evidence of diabetes mellitus appears.

In the laboratory there are a few simple things that we can do. One of these is the EKG. This may be either resting, or following exercise on the Master's test or the treadmill. We really ought to determine whether the patient has any abnormality of carbohydrate tolerance. This can be done either by the usual screening urinalysis, by a fasting blood sugar or, depending upon how sophisticated you want to be, by a glucose-tolerance test.

When it comes to the serum lipids, most of us of course measure the serum cholesterol, and if the patient has hypercholesterolemia, we consider that quite significant. Whether or not you measure the serum triglycerides depends upon how seriously you have taken some recent reports about them. A relatively simple test for serum triglycerides is the serum optical density. It is an easy one to do in your office, and it may be of some value.

If all of these factors are present, and if you like to play with letters and words as well as I do, you'll find that the first letters of the words and phrases that I have used form an acrostic, "SUDDEN DEATH" (Table I).

TABLE I

AN APPROACH TO EVALUATION OF THE CORONARY PRONE INDIVIDUAL

	S moking
From the history:	**U** ntimely or premature coronary heart disease
	D iabetes mellitus
	D iastolic hypertension
From the physical examination:	**E** vidence of increased lipids (xanthelasma)
	N utritional status
	D iabetic retinopathy
	E KG abnormalities
From the laboratory:	**A** bnormal glucose tolerance
	T riglyceride increase
	H ypercholesterolemia

WHAT SHOULD THE PHYSICIAN COUNCIL PATIENTS TO DO?

Now, what about a specific attack upon these risk factors? Of all the factors that we have talked about, smoking is the only one of which a deliberate reduction will influence the prognosis favorably. It is the only one about which it has been proved that if the patient deliberately reduces his intake, the prognosis will be influenced. In this area we physicians are not aggressive enough. Our tendency, you know, is to be apologetic. We ought to cite the facts in as vivid a way as possible. Whether we cajole or coax, reform, frighten or threaten, I think we should be more aggressive than we have been.

Patients ask me, and I am sure they ask you, "Doctor, do you smoke?" When I say "No, I never have," they tell me, "Well, you just don't know what it's like to try to quit!" It is true, I *don't* know what it is like to stop smoking. It is difficult to get men to stop smoking. Nonetheless, the facts seem to be clear. I have

stopped being equivocal about this in my contacts with patients. I come down hard against smoking!

Now what about diet and cholesterol? As far as hypercholesterolemia and the deliberate reduction of serum cholesterol are concerned, their influence on the prognosis for coronary artery disease is not as clear-cut as is that for smoking. Several studies have been attempted —one of them the National Diet Heart Study by Dr. Stamler's group in Chicago. That experiment and his previous study using estrogens, tend to indicate that if the serum cholesterol is reduced there is a decreased incidence of coronary disease. But this is not really an established fact as yet.

In an attempt to test that hypothesis—whether or not the deliberate reduction of serum cholesterol is important—the USPHS, under the auspices of the National Heart Institute, developed a program called the Coronary Drug Project that I'm going to take just a few minutes to talk about. Some of you may know about it already. The Coronary Drug Project was designed to test whether or not four different cholesterol-lowering drugs would influence the mortality and the secondary events following myocardial infarction in men between the ages of 30 and 64. It has developed as a national cooperative study. Eight thousand five-hundred men are to be enrolled in it, and there are 55 centers throughout the U. S.; Iowa happens to be one. We are planning to enroll approximately 160 men in this age group, and over the next five years to test the results of treating them with one of the cholesterol-lowering drugs. There is also going to be a control group, for this is to be a double-blind experiment.

There are always a lot of difficulties to overcome in national cooperative studies. But this study was designed to test the hypothesis that deliberate lowering of serum cholesterol will alter the course of coronary artery disease. Within five or six years we may have an answer. As of right now, we don't.

SUMMARY

I have tried to identify some of the risk factors in coronary disease, and I am sure I have been repetitious for many of you. But repetition is a form of teaching. I have outlined what I believe is a method of evaluating the coronary-prone individual. Obviously, there is nothing very new in that, either. Then I have said a few things about specific attacks on the unequivocal risk factors. First there is the attack on smoking, and second, perhaps an attack on hypercholesterolemia.

We are in the middle of what someone has called "the great American epidemic." On the basis of the knowledge we now have, I think it is time for us to mount a serious attack on this problem.

Malpractice-Insurance Rates Raised

Revisions in the basic limit rates for physicians and surgeons' professional liability insurance in 22 states were announced on October 2 by the Insurance Rating Board on behalf of its member and subscriber companies.

The IRB also reported that the table of increased limit factors for this line of insurance has been revised upward. This revision will result in a 50 per cent rise in premiums for limits of coverage in excess of the basic limits of $5,000 per claim and $15,000 for all claims during each annual policy period.

The changes were made effective October 2. The revisions in basic limit rates resulted in increases in 21 states and a reduction in one.

The rating organization attributed the rate increases to adverse underwriting results experienced by companies providing physicians and surgeons with liability coverage in the affected states.

The states where the basic limit rates are revised and the percentage changes in the statewide rate level are:

Alaska	+15	Maryland	+55
Arizona	+50	Missouri	+30
California	+38.2	Montana	+75
Colorado	+50	Nebraska	+20
Georgia	+30	Nevada	+50
Idaho	+50	New Mexico	+33.3
Illinois	+20	Ohio	+75
Indiana	+30	Oklahoma	+10
Iowa	+30	Oregon	−15
Louisiana	+33.3	Utah	+45
Maine	+10	Vermont	+100

The revised table of increased limit factors is effective also in the District of Columbia, Kansas, Massachusetts, North Dakota, South Dakota, Texas, and Washington, where basic limit rates were not revised.

Non-Gynecologic Malignancies and Pregnancy—A Review

NORMAN K. RINDERKNECHT, M.D.
Des Moines

MALIGNANT TUMORS HAVE NOT BEEN diagnosed frequently enough during pregnancy to permit the establishment of firm principles of management. Yet the obstetrician occasionally sees or is consulted regarding a patient with coexistent malignancy and pregnancy. Lacking expertise, especially regarding the various extrapelvic malignancies, he must base his advice regarding the management of these lesions on his memories of what he learned in medical school, on his limited personal experience or on the nearest available reference. It is the purpose of this paper to clarify the management of, and the therapeutic approach to, the various non-gynecologic malignancies which might occur in a pregnant patient.

Some pertinent questions regarding this dilemma were posed by Boronow in an extensive review of extrapelvic malignancies and pregnancy:[4]

1. Does pregnancy alter the prognosis for the patient?
2. Will she benefit by termination of pregnancy?
3. Will she benefit from castration?
4. May she have subsequent pregnancies?
5. Will her malignancy affect the fetus?
6. Will the therapy for her malignancy affect the fetus?
7. When should the therapy be started?

In a study of 700 cases of cancer in pregnancy seen at Memorial Hospital, New York, the five commonest types, in order of their frequencies, were breast cancers, lymphomas, melanomas, gynecologic malignancies (as a group) and bone tumors.

This paper was presented at the District VI meeting of the American College of Obstetrics & Gynecology, in Iowa City on November 17, 1967.

BREAST CARCINOMA

In spite of the fact that carcinoma of the breast is the commonest cancer in females, considerable misinformation has been disseminated about it. Opinions regarding the prognosis of breast cancer in young women—and particularly in pregnant young women—have varied widely. Historically, the prognosis has been grim. Several reviews of breast cancer and pregnancy published prior to 1943[12, 14] led Haagensen to conclude at that time that radical mastectomy was not justified in patients with breast carcinomas that developed during pregnancy. A trans-Atlantic argument is still being waged over simple mastectomy and radiation versus radical mastectomy. Our colleagues in general surgery continue to debate the timing of oophorectomy as a treatment for the premenopausal patient with breast malignancy. Hopefully, well-controlled cooperative studies will settle many of these differences.

Breast cancer is associated with approximately one in every 3,200 pregnancies.[18, 29] In a review of the world literature, White reported a 2.9 per cent incidence of associated pregnancy in 45,881 patients of all ages with breast cancer.[28] An incidence of only one breast carcinoma per 10,000 pregnant women was recently reported by Robinson.[24] That figure represents only an 0.7 per cent association between pregnancy and breast cancer in Spokane. In various series of radical mastectomies with or without x-ray therapy, the overall five-year survival rates in the United States have been between 40 and 50 per cent.[4] Haagensen recently reviewed seven of the largest reported series, totaling 421 cases, of concurrent breast cancer and pregnancy during the past 30 years.[13] He was able to show that during the 15 most recent years approximately one-third of the patients who have undergone mastectomy for carcinoma of the breast which de-

veloped during pregnancy or lactation survived five years. Further study of his series revealed no statistically significant difference between the end results in patients whose disease was diagnosed during pregnancy and those in whom it was diagnosed during lactation.

Many factors such as age, biologic stimulation, gestational anatomic changes, inflammatory lesions and psychologic factors have been mentioned as possible causes of the lowered five-year survivals among pregnant women with breast cancer. The idea that survival is poorer in the younger women was successfully challenged by the study of Treves and Holleb.[26] Biologic stimulation is very difficult to quantitate. There is no relationship between inflammatory carcinoma and carcinoma of the breast during pregnancy. Any antepartum breast abscess should always be biopsied. The increasing vascularity and mass of breast tissue during pregnancy certainly can make it difficult to detect a significant lump in the breast, and can facilitate early regional lymphatic spread. From his experience at the Mayo Clinic, Pratt states that pregnant patients with breast cancer are more likely than other women to have axillary metastases, and that the survival rate with axillary metastases is not so good in the pregnant as in the non-pregnant patient.[23]

Early diagnosis provides the only hope for improving survival figures for pregnant patients with breast cancer.

Should the pregnancy be terminated? In a series of 283 cases of breast carcinoma associated with pregnancy reported from Memorial Hospital, New York, in 1962, therapeutic abortion did not enhance survival, regardless of whether nodes were positive or not.[17] Holleb and Farrow, in the same study, advised abortion only if the primary tumor was inoperable and therapeutic abortion would thereby become part of a program of palliative estrogen ablation. In his most recent review of cancer of the breast and pregnancy, Haagensen agrees that interruption of the pregnancy may have a palliative value when cure seems unlikely, but he also emphasizes that interruption of the pregnancy is in no way related to cure by radical mastectomy.[13]

Women with pregnancy following treatment for cancer of the breast constitute a different and perhaps a select group. The patients with early metastases and/or an aggressive biologic tumor have been eliminated. Holleb summarizes current opinion by saying, "There is uniform agreement that if primary treatment of the breast malignancy fails, the patient will die regardless of a simultaneous or subsequent pregnancy, and on the other hand if the cancer had been completely removed, there is no conclusive evidence of added risk to the patient because of co-existent or future pregnancies."[18] However it is generally recommended that a patient with breast cancer should receive definitive treatment and then wait for at least three years before electively becoming pregnant. It would seem, then, that the same considerations apply to breast cancer in a pregnant women as apply to breast cancer occurring in any other young woman. Practical considerations such as histology and extent of tumor must be considered.

Philosophical considerations such as the importance of motherhood and family cannot be ignored. Each physician will be guided by his personal experience and personal convictions.

LYMPHOMAS

Leukemia during pregnancy is rare. A review of 62 cases of acute and chronic leukemia and pregnancy was presented by Grier and Richter in 1939.[10] They found a fairly equal distribution between chronic and acute leukemia, and 100 per cent maternal mortality in the latter group. In the past decade there has been a change in the type of leukemia found more frequently in pregnant women, and consequently there is increased emphasis on problems associated with acute leukemia in pregnancy. In 1958 a review of acute leukemia and pregnancy from Sloane Hospital again reported a 100 per cent maternal mortality, and also noted an increase in the incidence of premature labor and postpartum hemorrhage.[30] Some improvement in maternal survival was finally reported in 1966, when Hoover and Schumacher reported 59 cases of acute leukemia and pregnancy treated from 1954 through 1964, with only four maternal deaths.[19] The introduction of steroid and antimetabolite therapy in the past decade has obviously improved maternal salvage, and it has also doubled fetal salvage by doubling the survival period of the mother.[8] As our knowledge of steroids and an-

timetabolites grows, an increasing number of pregnant patients are being treated with those drugs. Following their review and analysis of the literature, Hoover and Schumacher cautioned against giving antimetabolities in the first trimester, and said that if corticosteroids were used at that time they should be given only in small doses (25 to 50 mg. of prednisone per day).[19] Antimetabolites can be used to advantage after the first trimester, and the drug of choice remains 6-mercaptopurine. Hemorrhagic manifestations may complicate acute leukemia in pregnant patients, and fresh-blood transfusions afford an effective, although temporary, method of treatment. Hypofibrinogenemia may be associated with leukemia,[30] and it must be diagnosed and then treated specifically. Infection may be difficult to detect and manage in patients with acute leukemia.

Quite in contrast to the acute disease process, chronic granulocytic leukemia is tolerated quite well by pregnant women, and neither the fetal nor the maternal mortality is greatly elevated. Many cases of chronic myelogenous leukemia can be safely allowed to go without treatment during pregnancy. However in the presence of a rising white blood cell count, an enlarging spleen and other signs of a rapidly progressive disease, treatment should be started. Busulfan (Myeleran) is most commonly used for chronic granulocytic leukemia, and chlorambucil (Leukeran) is recommended for chronic lymphatic leukemia.[4] X-ray therapy to the spleen and nodal areas is frequently used in association with the chemotherapeutic drugs.

The question of possible transmission of leukemic cells from mother to fetus continues. Diamandopoulos and Hertig attempted to determine this by means of a long-term follow-up study of the offspring of 33 women who had been pregnant while ill with leukemia or with one of the allied diseases.[7] None of the 34 living or 12 autopsied offspring showed any signs of their mothers' diseases. In 1966, Hoover and Schumacher reported that one of 38 viable infants in their series developed leukemia, and then implied that the disease can be transmitted by the mother to her offspring.[19] All agree that, coincidental or not, such transmissions are rare.

The commonest hematologic malignancy occurring in conjunction with pregnancy is Hodgkin's disease. In an extensive review of this problem, Barry, Diamond and Craver reviewed the charts of 347 patients who were within the childbearing age bracket and who had Hodgkin's disease.[2] Eighty-four of them had 112 pregnancies, and pregnancy did not affect their mean survival time of five years. They also reported no increase in activation of the disease as a result of pregnancy. The treatment should consist of radiation for localized disease and chemotherapy, when necessary, for systemic disease.[3, 4] The alkylating agents cyclophosphamide, the nitrogen mustards and chlorambucil, and the vinca alkaloid vinblastine are being used, and from early reports they apparently are safe when administered after the first trimester in the doses usually needed to control tumor activity.[21] Therapeutic abortion has no effect on the course of Hodgkin's disease.

The advice that should be given to a young woman with Hodgkin's disease who desires a pregnancy is also of concern. Barry, Diamond and Craver suggest that a patient with Hodgkin's disease should wait until a two-year period of quiescence has elapsed before becoming pregnant.[2] Statistically she then has a 75 per cent chance of long survival, and a 50 per cent chance of a long period of relatively good health, regardless of pregnancy. According to one review of concurrent pregnancy and Hodgkin's disease, a surprising number of patients failed to become pregnant a second time after the diagnosis of Hodgkin's disease was made.[16]

MELANOMAS

Malignant melanomas occasionally are diagnosed in pregnant patients. George, Fortner and Pack reported a study of 115 cases of melanoma and pregnancy and 330 controls.[9] They concluded that the spread to regional nodes seemed to be more rapid in the pregnant patients, but that stage for stage, pregnancy did not influence the outcome. Another report, by White *et al.* in 1961, concluded that pregnancy exerted no deleterious effect on the survival of women with melanomas.[27] They reported 73 per cent five-year survivals among 30 pregnant patients. George and associates reported 50 per cent five-year survivals in their series.[9] Thus the patient previously treated for malignant melanoma has little reason to fear pregnancy.

GASTROINTESTINAL MALIGNANCIES

Malignancies of the gastrointestinal and biliary tracts are rare during pregnancy, since the peak incidences of such cancers are in a much older age group. Yet O'Leary, Pratt and Symmonds recently reported a series of 17 cases of pregnancy complicated by intestinal malignancy.[22] The rarity of this problem in pregnant patients, together with an inclination to ascribe all of the symptoms to pregnancy, may cause a serious delay in diagnosis. When operable, just as in the non-pregnant patient, the gastrointestinal neoplasm is treated surgically. When infant viability has been reached, the approaches vary. Delivery, either vaginal or abdominal, can be combined with definitive resection of the tumor, or the infant can be delivered and then several weeks can be allowed to pass before resection. In the meantime the vascularity diminishes and the operative field becomes more favorable.[4]

UROLOGIC MALIGNANCY

Carcinoma of the genitourinary tract may occur during pregnancy, but it is extremely rare. No renal or vesical neoplasms were found in a survey of over 20,000 obstetric patients delivered during a six-year period at Mount Sinai Hospital, New York City.[11] Heller reported the nineteenth case of a renal neoplasm complicating pregnancy in 1964.[15] Also in that year Choate *et al.* reported three cases of carcinoma of the bladder in pregnancy, bringing the total of such reported cases to six.[6] Because of the paucity of case reports available, nothing remains to be said except that hematuria must be adequately investigated in the pregnant patient.

THYROID MALIGNANCY

Although thyroid cancer is not common, it is commoner in females than in males, and quite often it occurs in women during their childbearing years. Breese, in 1963, reported 217 cases of thyroid cancer in such women.[5] Sixteen were pregnant at the time of diagnosis and treatment. Forty-four had known thyroid tumors during one or more pregnancies, and 34 patients were known to have had one or more pregnancies subsequent to therapy. In none of those women did there appear to be any effect either of the pregnancy on the cancer, or of the cancer on the pregnancy. In 1965 Rosvoll and Winship reported a series of 60 women who had thyroid carcinoma and subsequently became pregnant.[25] They found that thyroid carcinoma was not influenced by pregnancy, and concluded that thyroid carcinoma should not be a cause for the prevention of pregnancy or for therapeutic abortion.

TUMORS OF THE CENTRAL NERVOUS SYSTEM

The concurrence of tumors of the central nervous system and pregnancy is uncommon. Kempers and Miller reviewed the literature and reported experience that they had had with 16 patients in whom pregnancy had been associated with brain tumor at the Mayo Clinic, from 1950 to 1963.[20] They found that many patients with brain tumors, particularly meningiomas, noted the onset of symptoms during pregnancy, and they said that patients with supratentorial tumors had the best prognoses. Management was individualized, and neurologic surgery could often be delayed until infant viability was achieved. Interruption of pregnancy was suggested only for patients with uncontrolled seizures, particularly if the intracranial tumor could not be completely removed.

CONCLUSION

Treatment of the malignancy and management of the pregnancy, though necessarily related problems, demand separate and at times almost equal consideration. Few generalizations can be made, for with each malignancy—and indeed in each pregnancy—consideration must be given to the particular circumstances likely to determine the prognosis for both the mother and her fetus. The wisest policy would seem to be individualization of treatment. Only by considering all possible factors—the patient's prognosis as regards the neoplasm, her religious convictions, the attitude of the patient and her husband toward the prospective child, the present size of their family and their ability to care adequately for another child—can the physician offer acceptable and helpful advice.

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Physicians' Meeting on Violence and Aggression

"Violence and Aggression" is the theme of a two-day meeting to be held November 15-16 at the Conrad Hilton Hotel, in Chicago. The two-days of keynote addresses, panel discussions and workshop sessions are co-sponsored by Area Four of the American Psychiatric Association and the American Medical Association. More than a thousand guests from the eleven midwestern states are expected to attend the meeting, according to Dr. Lester H. Rudy, general chairman, and director of the Medical Center Complex of the Illinois Department of Mental Health.

The two-day institute will begin Friday morning, November 15, with welcoming remarks by Governor Samuel Shapiro. After Dr. Walter Barton, medical director of the American Psychiatric Association makes a special presentation, Dr. Laurence C. Kolb, director of the New York State Psychiatric Institute and past president of the American Psychiatric Association, will give the keynote address.

"Group Violence," "Aggression in Adolescence," "Clinical Management of the Violent Patient," "Research Investigations of Aggression and Violence," and "Forensic Perspectives of Aggression and Violence," are the subjects of the five workshops which will be held on Friday afternoon. Panel discussions on these same subjects will be held on Saturday afternoon.

Two sections on violence and aggression will be held Saturday morning, November 16. "Violence Associated With Organic Brain Disease" will be discussed by Dr. Mortimer D. Gross, dean of the Post Graduate Center for Mental Health Education at Forest Hospital, Des Plaines, Illinois, and in the other section Dr. James W. Hamilton, of the Department of Psychiatry at the University of Cincinnati, will talk on "Some Observations on the Assassination of President Kennedy."

The meeting will conclude with a general session on Saturday afternoon featuring an address by Dr. John Spiegel, director of the Lemberg Center for the Study of Violence at Waltham, Massachusetts. There will also be remarks by Dr. Benjamin Boshes, chairman of the Department of Neurology and Psychiatry at Northwestern University; Stanley Yolles, director of the National Institute of Mental Health, at Bethesda, Maryland; and Dr. Roy R. Grinker, Sr., director of the Psychiatric and Psychosomatic Institute at Michael Reese Hospital, Chicago.

Toward Understanding Suicide

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Iowa City

Whenever Richard Cory went down town,
We people on the pavement looked at him;
He was a gentleman from sole to crown,
Clean favored, and imperially slim.

And he was always quietly arrayed,
And he was human when he talked;
But still he fluttered pulses when he said,
"Good-morning," and he glittered when he walked.

And he was rich—yes, richer than a king—
And admirably schooled in every grace;
In fine, we thought that he was everything
To make us wish that we were in his place.

So on we worked, and waited for the light,
And went without the meat, and cursed the bread;
And Richard Cory, one calm summer night,
Went home and put a bullet through his head.

—Edwin Arlington Robinson
From "The Children of the Night"
(1897)

THE POET ROBINSON has dramatically captured the mystery of suicide. He leaves us in stunned disbelief, as indeed we are left by a majority of deaths we judge to have been self-inflicted. Not only does our reaction reveal a natural curiosity surrounding the mystery of death, but it also points to our harsh condemnation of self-destruction. In suicide we confront a behavior which not only bewilders our understanding but toward which we react in a highly charged manner.

In order to increase our understanding of self-willed death, we should explore both the meaning of the act and our emotional response to it—a response which colors our interpretation and shapes our approach to the problem. My purpose here will be to present a simple framework within which the variety of meanings of suicide may be conceptualized, and to examine the societal reaction to self-destruction. From this discussion an attempt will be made to draw implications for prevention.

Most psychiatric textbooks include discussions of suicide within chapters dealing with depressions, for the risk of self-destruction is known to be high in these disorders. That risk is not, however, by any means confined to states of morbid despondency, but occurs in other psychoses, neuroses and personality disorders as well. Nor does the act lie entirely within the realm of the psychopathologic, for some apparently normal persons kill themselves. Several recent attempts have been made to classify suicidal persons according to type. One author, in a study of self-destructive phenomena in the Scandinavian countries, identified three distinct types in different countries.[4] He identified "dependency loss," "performance," and "moral" types, and described a predisposing personality makeup and a unique precipitating stress for each of them. The labels he chose pointed to basic organizing principles of the various personalities, which if stressed might precipitate a suicidal act. Such an effort at classification is of interest, but in the present state of our knowledge it seems premature and oversimplified.

We are scarcely able to define what we mean by "suicide." Should a man who jumped through a tenth-story window while in a state of delirium and seeking to evade an imagined persecutor be said to have committed suicide? Or should it be thought a suicide for a person to initiate a presumably self-destructive act, though he then, accidentally, is rescued? Or should the soldier who threw himself upon a grenade in an effort to spare the lives of his comrades be said to have committed suicide?

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We do best, perhaps, to recognize that suicide may be a symptom of a wide variety of disorders, or that it may be an act determined by any of a multiplicity of motivations or forces.

PSYCHODYNAMICS

An understanding of suicide may be organized around an awareness of the meaning which death has for those who so violently confront it. Approaching an inquiry in this manner, we find that several meanings can be identified. "Death," according to WEBSTER'S INTERNATIONAL DICTIONARY, may have at least three distinct, if interrelated, meanings namely: the act of dying, the end of life and afterlife. By separating these aspects of death, though the separation may be artificial, we find it possible to identify psychodynamic constellations involving a primary orientation toward one or another of them.

Let us first consider dying. The emphasis is upon the last act of life, and it is here that three major motivations for suicide can be classified. In dying one assumes a role or identity. For example, in Western society we commonly expect persons to be courageous and dignified. Not infrequently we expect them to make no direct expression of their awareness that death is approaching. Also, we are accustomed to judging persons according to the manner in which they face death—death which is felt by many to be the ultimate emotional stress. From Los Angeles, in October, 1967, came the report of a 56-year-old woman who police said had burned herself on the steps of the Federal Building because she "had a deep feeling against the slaughter in Vietnam." A security guard said that the woman had poured a can of gasoline over her body and had set herself on fire. Clearly her dying took the form of a protest—a protest which could perhaps have been expressed in no more indelible a manner. Thus, in dying she assumed the identity of a protester.

In March of this year a young lieutenant fell wounded during a battle for Khe Sanh, in South Vietnam. As members of his detachment rushed forward through enemy fire to rescue him, he waved them back, and to avoid capture killed himself with a shot into his head. In dying he assumed the role of hero, and it is of note that his action was nowhere referred to as a suicide—that term being generally reserved for unfavorably regarded acts.

In dying, individuals are confronted with a situation in which they may feel utterly helpless and deserted. Nothing is more certain than death. Consequently their ultimate assertion of mastery or display of omnipotence may come from exercising control over the way they live or die. Confronted with helplessness and an inability to cope with life, certain individuals seeks a final reversal of that state of affairs. It is into this category that we tend to place a number of schizophrenic suicides. Certain of these patients regard their progressive estrangement from the world of humanity and the decompensation of their personalities as a psychological or emotional dying. To forestall or to complete a process which they feel has already begun, they take their own lives. We suspect that this feeling of mastery may be illusory, and yet we encounter quite a number of examples of seeming illogic as we examine suicidal motives.

The final and perhaps the most frequent of motivations is revenge. Dying here takes on the meaning of retaliatory abandonment. An examination of the child's concept of death reveals the origin of the view that death involves a leaving or an abandonment. Children regard death as a departure and as a reversible, casual event, but they never see it as occurring by accident or as a natural happening. Confronted by the death of a parent, the child experiences resentment over having been abandoned, but he also feels that he, himself, is somehow responsible. The suicide, by a deliberate act, subjects his survivors to emotional rejection, and in so doing he unleashes the fury of the survivors' consciences. Speaking through his act, he says, "You killed me!" Last October the Cleveland newspapers carried the dramatic story of a rejected suitor who wounded his newlywed former girlfriend and killed himself, after holding her captive in his apartment throughout a gunfire-punctuated weekend. His desire for revenge and for achieving rejection on his own terms was amply evident in the account. Hara-kiri, though increasingly rare, is an institutionalized type of suicide. An offended Japanese commits hara-kiri at the doorstep of his offender, who in turn is then subjected to disfavor by the community. Revenge is thus

achieved through action on the part of the community.

Moving on to motivations for suicide which are oriented basically toward the end of life, we encounter the desire for escape. It may be of little consequence to the individual how that end is brought about, or even the final consequence in terms of oblivion or afterlife. Man has the alternatives of fight or flight. Perceiving himself imprisoned by a set of unalterable circumstances, be they physical, interpersonal or spiritual, he may embrace death as the final road to freedom. It is this motive which perhaps is the most readily understandable and which requires the least illustration. In the summer of 1967 an escapee from the Iowa Men's Reformatory stabbed himself when he was about to be recaptured. The investigation of a suicide in Los Angeles uncovered this note: "I can go on no longer, so will take the easy way out."

A final category includes suicides best understood from the standpoint of their orientation toward afterlife. Here we encounter desires for reunion and atonement. In many primitive societies, suicide was socially sanctioned as an acting-out of the mourning process. From and early period there are records of customs that compelled widows to take their lives immediately after the deaths of their husbands, and servants to follow their masters in death. In these types of suicide can be seen primitive man's beliefs in immortality and the joining of spirits beyond the grave. There came in September, 1967, from Rockledge, Florida, a story of a young sky-diver who jumped to his death five weeks after his pretty wife of one year had died in a sky-diving accident. The newspaper account stated that he jumped to his death from the same plane, clasping his hands in prayer instead of yanking the ripcord. Prior to his suicide he had paid for his funeral, and had requested burial at the side of his beloved. One can clearly note in this account the elements of identification with his deceased wife (dying in the same manner) and the hope of rejoining her beyond the grave. In present-day mourning we mimic rather than embrace death by withdrawing from life and assuming a shroud of black. It is occasionally startling to note that the hoped-for-reunion is with a living being, as if in complete disregard of death, and it is in this connection that one of the major aids to understanding suicide is the recognition that the idea of one's own death is subjectively inconceivable. We tend to believe in our own immortality, or as Freud noted, "When we attempt to picture our own death we find ourselves continuing as observers."[2] It seems therefore that when applied to oneself death is not really the end of life, for existence is felt to continue, though altered in some profound fashion.

The reunion mentioned may be a part of the dynamic constellation underlying the suicide of depression. Simply stated, the individual suffering from depression seeks what he feels to be deserved punishment, by means of which he hopes to achieve atonement—reparation for offenses leading to a reconciliation in love with family members, friends, physician or God. Persons suffering from depressive illnesses experience not only a pervasive sense of hopelessness and despondency, but also a profound feeling of guilt or sinfulness. That guilt may become so intense and oppressive that only death seems an adequate punishment. Consideration of suicide is a distinguishing feature of these disorders, but the severity of depression is by no means an accurate indicator of the degree of suicidal intention, and the depressed individual's desire for punishment may be a less adequate explanation for his act than is his desire for escape.

One final motivation is highly significant, one which does not involve an orientation toward death at all. Of necessity, however, it does involve a high risk of fatal outcome, and as a general explanation it accounts for a majority of the non-fatal suicide attempts as well as for some that are fatal. The act actually constitutes a cry for help addressed, usually, to a particular person. Or it is an attempt to gain that individual's understanding and recognition of the potential suicide's needs for protection, recognition, reassurance, love or whatever.

Often people feel that there is no other way in which they can communicate the desperation they feel except by demonstrating that they are prepared to choose death. For this communication to be effective, moreover, they must genuinely risk death. The more convincing the suicide attempt, the more compelling

the demand. Often these people imagine rescue in a kind of gamble with fate. They seem to say to themselves, "If my maker or my lover wishes me to remain alive to the extent that he will snatch me from the jaws of death, then surely he will guarantee that my needs for love and for meaning in life will be met." How many persons, we may ask, accidentally end their lives as they risk them in attempts to communicate their despair in the only way they know how?

The reader cannot help noting an admixture of motivations in some of the examples cited. Indeed it is conceivable that a single suicide, in some degree, may incorporate all of the motivational forces that have been described.

SOCIAL ATTITUDES

A few remarks should be made about the cultural reaction to suicide which at every turn influences our approach to persons contemplating it. Self-destruction, like other sorts of death, is a tabooed subject—or at least it is not to be discussed except in the relative comfort of the supposition that it is a manifestation of mental illness. For most persons it is unthinkable and unjustifiable. It remains a legal offense in only nine states, but it is frequently cited in insurance policies as a basis for excluding benefit payments to survivors, and it leads to a refusal of religious funeral services in many instances. It implies an element of family disgrace and sin, especially among Catholics, leading to attempts to hide the deceased's cause of death. Students of the subject even suspect that a number of the suicides, themselves, seek to obscure their acts by choosing methods which will make their deaths appear accidental. Irrational responses of the survivors and the community to instances of self-imposed death are most revealing of this cultural attitude. Community, neighbors and family frequently heap blame upon the suicide's surviving spouse. One study uncovered instances of actual finger-pointing, and made note of the phrase "drove him to it" reverberating through community gossip.[1] Also noted was "the ferocity of guilt" in the survivors, attributed first to rage in reaction to a presumed deliberate rejection by the suicidal individual. Secondly, it was related to the survivors' feeling of responsibility for the suicide's death, in the sense of not recognizing his torment. Thus the suicide vengefully unleashes the fury of the survivors' consciences.

THREE DILEMMAS

What implications can we draw for understanding and preventing suicide, and for treating the potentially self-destructive patient? It should be clear, first of all, that understanding of an individual's suicidal potential and, consequently, the basis for predicting a self-destructive act must come from the patient's own statements with respect to suicide. It seems important to identify and distinguish between death wishes and suicidal thoughts, on the one hand, and on the other hand definite intentions to commit suicide, together with plans and the means for carrying it out if the desire becomes strong. Knowledge of the individual's fantasies and of his attitudes toward death is likewise essential to understanding his potential, and predicting whether or when he will attempt suicide. In times of emotional stress, death wishes and suicidal thoughts are extremely common, and the physician should not suppose that by broaching the subject he may be suggesting an action that his patient has not already considered. Only by means of direct questioning regarding death can the physician identify such factors as (1) strong identification with, or hope of rejoining someone deceased; (2) a belief that death would be a deserved form of punishment; or (3) intense rage or a desire for revenge, with other avenues of expression blocked.

Previous suicidal attempts increase the likelihood of future ones, in part, perhaps, by establishing a pattern of reaction. Here also, the physician must inquire in great detail about the events preceding those attempts, and about the precipitating circumstances, the intent and the results in terms not only of the individual's response of guilt, relief, disappointment, etc., but also in terms of the reactions of the patient's spouse, family or friends. Was that response intense, and was it one of guilt, rage or indifference? It also is often worthwhile to learn the patient's response to suicidal ruminations. Has the patient been horrified, comforted or restrained from action? The physician needs to decide for himself what it is that draws the patient to suicide and what holds him back.

Here it seems appropriate to mention the first of three dilemmas that the physician faces

with respect to suicide. Society has charged him with the task of predicting self-destructive behavior, and perhaps reluctantly, he has accepted that charge. But at the same time the taboo attached to the act, and the resultant fear and condemnation which it arouses, often place a barrier in the way of his gaining the type of knowledge just described. Out of shame and fear of being rebuked, the patient does not divulge his thoughts of self-destruction. At the same time the physician often finds suicide as difficult a subject to inquire about as is sex. He must, therefore, examine himself for just such a fearful reaction, lest it operate outside his awareness and help to render him ineffective in predicting suicide. One error which he may fall into in this regard is that of associating suicide too closely with illness—or, for that matter, with depression. He may err in his predictions if he fails fully to appreciate that there are warning signs that do not necessarily indicate an impending or fully developed psychosis. Perhaps as few as one-third of suicides occur among psychotic individuals. Thus such a rigid categorization of suicidal phenomena would cause the physician to have a low index of suspicion for suicide among normal or neurotic individuals.

A second dilemma confronts the physician in his role as a therapist or as a healer who will help to clear away the factors which have brought his patient to the brink of self-destruction. The approach of psychotherapy is that of understanding rather than controlling behavior. It is one of the most fundamental principles that the therapist must remain non-judgmental and uncritical, and therein lies his dilemma. At the mention of—or suspicion of—suicidal intention he immediately becomes judgmental. He has been charged with preventing suicide, and having assumed that responsibility he must act—he must act in order to uphold the most basic values of his society. In doing so, however, he finds that communication has been blocked and a barrier has been erected by both his anxiety and the patient's.

In a time of crisis, when the patient feels that suicide is a very possible solution for his problems, the subject demands frank discussion. In part, the knowledge that a therapist gains from such a discussion forms the foundation for an understanding of, and a commitment to, the patient great enough to make the patient pause and weigh his choice carefully. However the more certain the physician feels that a genuine suicide attempt is imminent, the more decisively he must act to prevent it. And the patient, aware of the physician's position, is more and more careful to obscure his true feelings and intent. Perhaps the solution to this dilemma lies in recognizing that without the restraint provided by hospitalization, a patient is psychiatrically untreatable at such a time.

Hatred or revenge—a prominent motive in suicide—requires special notice. Resentment stemming from real or fancied disappointments may be directed toward the patient's spouse, family or—not infrequently—physician. Whether or not the potentially self-destructive individual is encouraged to proceed or hold back from suicide often depends upon the degree to which he senses—often unconsciously—that the act would be effective in achieving the desired hurtful end. The point to be made is that the patient's relatives quite often encourage him in the direction of ending his life through their attitudes, both conscious and otherwise. Such an attitude may be one of rejection, but perhaps more often it is an ambivalent one. In such an instance the patient senses the vulnerability of the spouse or relatives to feelings of guilt in the event of his suicide. The physician must maintain a lookout for those family forces that might seduce or prod his patient into taking his own life. If the doctor senses their existence and believes he cannot alter them, he should separate his patient from them.

The suicidal individual is also fully aware that by virture of his responsibility, involvement and exposure to a loss of prestige, the physician is especially vulnerable, and the patient may find this an additional reason for seizing upon suicide as a means of expressing his rage. It becomes important, therefore, for the physician to inform the patient, himself, and if necessary the patient's family, that he cannot carry the entire burden of responsibility for the life of the patient. In doing so he may well reduce the risk that the patient will resort to an irreversible act.

The third dilemma with which the physician is faced also involves this matter of responsibility for preventing suicide. The physician who fails to anticipate the suicide of one of his patients often is not only berated harshly by his own conscience, but in addition—and quite

wrongly—often becomes the object of public condemnation as the guilt of many is projected upon him. Anticipating this reaction, he may be prodded into untherapeutic maneuvers. The potential suicide becomes "too hot to handle," and to avoid being "burned," the physician may too readily hospitalize him, instead of giving him the curative personal relationship that he is seeking. Such action is some instances may deprive the patient of the opportunity to resolve a crisis by means of his own resources. Perhaps worse, quite unknowingly the doctor may reject the patient in an effort to escape the responsibility, and that could carry with it some devastating consequences. The physician who fails to recognize this as a potential motivating force behind his behavior toward certain patients may unwittingly contribute to a suicidal act. As I said in the previous paragraph, it is important for the physician at all times to share responsibility with the patient's family and with other professional persons. He should maintain both a willingness to assume such a responsibility and a readiness to share it —even, at times, over the objections of his patient. The greater the risk, the greater his responsibility to communicate this impression to the family and the community.

Finally, we recognize that escape is a motive frequently seized upon by those who have abandoned hope and who feel themselves helpless in their immediate situations—helpless, or without a helping person in whom they trust. Fortunately these persons are suicidal for relatively brief periods at the peak of a crisis. At such moments any one of us, professional or otherwise, merely because he cares and is human, can save a life. A final example illustrates the influence of intervention at a decisive moment. It was, however, only partially successful. A report from Sidney, Australia, in the summer of 1967, told of a woman who found Sidney's "suicide point" already occupied when she went there to end her life. Forgetting her own troubles she spent two hours, that night, talking to a man whom she found about to jump from the 100-foot cliff into the ocean. She thought she had talked him out of taking his life, but in the early hours of the morning he suddenly stood up, shouted "Alice, I love you!" and hurled himself to his death on the rocks below. Afterward, the woman told police, "That poor man saved my life."

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Statement on Influenza

(Released on October 4, 1968, by Julius Conner, M.D., Director, Des Moines Polk County Health Department.)

In July, 1968, Hong Kong experienced its largest outbreak of influenza A2 since 1957. Singapore and other Far Eastern countries, also, experienced epidemics in August and September. The current influenza strain (A2/Hong Kong/68) has also been isolated from Americans who have recently returned from these affected countries.

Because of this information, the Public Health Service has revised its influenza prospectus for the United States. Influenza A2 will probably occur with greater than normal prevalence from December, 1968, through March, 1969.

Current influenza vaccines may provide only limited protection against the new strain of Asian influenza. To develop better protection would take, perhaps, three to six months.

It is, therefore, recommended that available influenza vaccine be obtained by individuals over 65 years of age and those who suffer a chronic disease, regardless of age. Any question about a particular person or ailment should be answered by the family physician. Because the vaccine affords maximum protection two to three months after administration, it is advisable to secure this benefit as soon as possible.

Following release of the above statement, Dr. Conner was informed by the U. S. Public Health Service that a vaccine for the new strain of influenza will, very likely, be available sooner than expected, perhaps in two or three weeks.

Plan to Attend the

22ND AMA CLINICAL CONVENTION

in Miami Beach

December 1-4, 1968

University of Iowa
College of Medicine

Clinical Pathologic Conference No. 498

Drug Treatment, Leukopenia, Exfoliative Dermatitis

RAYMOND F. SHEETS, M.D. chairman,
CPC Committee
MRS. DONNA KENNEDY, secretary

SUMMARY OF CLINICAL FINDINGS

A 60-YEAR-OLD WOMAN was admitted to her local hospital because of pain in the low back and right pubic regions which was intensified when she walked. Those symptoms had been present for several weeks and had not responded to conservative measures at home. Radiographic examination of the lumbosacral spine and pelvis showed degenerative joint disease with changes in the right hip compatible with rheumatoid arthritis, as well. Her admission laboratory work at the local hospital included: white blood cell count 3,150/cu. mm., with 47 per cent segmentals, 2 per cent eosinophils, 51 per cent lymphocytes; hemoglobin 13.1 Gm. per cent; hematocrit 36 per cent; urinalysis normal; uric acid 5 mg. per cent; sedimentation rate 16 mm./hr. by the Westergren method. The latex test was positive. The patient's history included a cystocele repair seven years earlier and a generalized skin eruption after an administration of penicillin 20 years earlier.

The therapeutic regimen instituted at the local hospital consisted of Butazolidin, 100 mg. every six hours, and hot packs and short-wave diathermy to the low back and hips. The right pubic pain remitted, but intermittent backache continued. Two weeks after her admission her white blood cell count was 4,600/cu. mm., with 55 per cent segmentals, 8 per cent eosinophils, 2 per cent basophils and 35 per cent lymphocytes. A fasting blood sugar was 85 mg. per cent and the blood urea nitrogen was 18.1 mg. per cent. A repeat latex test for rheumatoid arthritis was weakly reactive. Two days later the patient experienced a chill and had a temperature elevation to 101°F. The Butazolidin was discontinued at that time, after two weeks of administration, and the patient was given aspirin. Her temperature subsequently rose to 103.2°F. Pharyngitis and a "blotchy rash over the nose and below the eyes, with swollen, red eyelids" then developed. A chest x-ray was normal. Throat cultures grew out beta Streptococcus, and a urinalysis demonstrated 25-30 hyaline casts per low-power field. Benadryl, 25 mg. q8 hrs., was begun.

The rash extended to the patient's arms and chest, and became hemorrhagic about her lips and pharynx. Purulent material appeared in her eyes. Oral Achromycin was started 16 days after admission. The patient's temperature elevation persisted, however, and she developed dysphagia. Medrol, 10 mg. q6 hrs. intramuscularly, and an infusion containing 40 units of ACTH were administered. The patient's eight-hour urinary output decreased to 125 cc. It contained numerous white cells and a few red cells. Her cutaneous eruption became bullous and was quite painful in the denuded areas. On her nineteenth hospital day, she was transferred to University Hospitals.

On admission here, the patient appeared to be in considerable distress. There was a generalized purple-red macular rash with areas of confluence. Bullae were scattered over her trunk and were present on both of her heels. Nikolsky's sign was positive. Some of the bullae had broken, and the patient would not

move because of severe skin pain. Her eyelids were swollen, and there was considerable conjunctival injection. Small, deeply pigmented ulcerations were present about her lips, mouth and pharynx. There was bilateral cervical adenopathy. Rales were present over the basilar portions of both lungs, but the heart sounds were normal. The abdomen was distended, and the bowel sounds were hypoactive.

The temperature on admission was 104°F.; the pulse rate was 120/min.; the blood pressure was 190/96 mm. Hg; and the respiratory rate was 32/min. The hemoglobin was 12.2 Gm. per cent, and the white blood cell count was 1,600/cu. mm., with platelets 79,000/cu. mm.; and the sedimentation rate was 78 mm./hr. Two to four granular casts were identified in the urine, and it also contained a trace of protein. The blood urea nitrogen was 36 mg. per cent; the albumin was 2.7 Gm. per cent; and the globulin was 2.7 Gm. per cent. A lupus erythematosus prep, an L.E. latex and a rheumatoid arthritis latex were all negative. A chest x-ray showed an infiltrate in the right lower lobe. The sputum grew a pure culture of Pseudomonas aeruginosa.

The patient was treated with intravenous fluids containing Solu-Medrol and erythromycin, 500 mg. q6 hrs. The bilateral corneal ulcers which developed were treated by local application of Neosporin ophthalmic ointment. The patient remained toxic and became disoriented. On her second hospital day, she suddenly became limp and died.

Dr. Sheets: I think I can put the case into perspective for you by reading a part of the report on the patient's physical examination. The examiner made this statement: "The rectal exam was started, but the glove became covered with surrounding skin upon contact, and the procedure was abandoned."

Miss Jones will discuss the protocol for the students.

Miss Mary Jones, junior ward clerk: After a careful consideration of the protocol, we have come to the conclusion that this woman displayed a systemic and cutaneous clinical picture of severe erythema multiforme bullae, often called the Stevens-Johnson syndrome. That is not a primary diagnosis, for it can be produced by many pathologic processes. The reaction may result from, or may be associated with, viral, bacterial, fungal or parasitic infections, pregnancy, food allergenic reactions, deep radiation therapy, internal malignancies including lymphomata or carcinomata, drug intolerances including a reaction to phenylbutazone, and collagen-vascular diseases.

Acute aleukemic leukemia is a possible cause. That disease rarely runs its course without presenting abnormal cells, and many times in acute myelogenous leukemia there are malignant cells which are misread as lymphocytes. Rheumatic pains may herald a sub-periosteal involvement of this disease. Hepatosplenomegaly and lymphadenopathy are not constant features of acute leukemia.

The patient's susceptibility to infections and her terminal cervical adenopathy support this diagnosis. A review of the literature suggests an association between acute leukemia and chronic phenylbutazone ingestion. On the other hand, the skin lesions and rash were not characteristic of the purpura of acute leukemia. Also the lack of peripheral hematologic abnormalities and the relatively brief ingestion of phenylbutazone tend to make this diagnosis less likely.

A Stevens-Johnson syndrome can result from a lymphomatous process. These polymorphic skin lesions are more common in Hodgkin's disease. The type of dysphagia this woman had is not well described in the protocol, but dysphagia and fever could result from mediastinal or retroperitoneal neoplasia, with a later involvement of the cervical lymph nodes. The hematologic picture in lymphomatous disease is extremely variable, but may be completely normal. Eosinophilia is found in 20 per cent of Hodgkin's disease patients, but an increase in lymphocytes suggests some process other than Hodgkin's. Thrombocytopenia is usually associated with leukopenia, and terminally the antibody production is impaired. It could have been for that reason that her late flocculation test changed from positive to negative. Secondary infection readily occurs in lymphomas. The absence of a presenting adenopathy, especially a cervical one, and the rapid progression of the disease do not support a diagnosis of lymphoma, although mediastinal adenopathy and overwhelming infection are a possibility. Bone marrow and lymph node examinations are necessary to rule out a lym-

phoma or a leukemia completely.

Skin biopsies would have been helpful in ruling out pemphigus. That skin disease presents with bullous skin lesions, a positive Nikolsky sign and systemic manifestations of pneumonia. The oral cavity is frequently involved, and the prognosis is grave. However the initial lesions of pemphigus are not seen following an erythematous rash. There are a few reports in the literature of a rapidly fatal, drug-induced pemphigoid type of reaction.

The combination of dermatologic, hematologic, renal, orthopedic and pulmonary symptoms suggests collagen-vascular disease as a good possibility. Acute exacerbations of polyarteritis nodosa frequently produce hemorrhagic bullae, erythematous rashes and nonspecific skin eruptions. Arthritic changes have been reported, but are uncommon. Eighty per cent of polyarteritis nodosa patients have renal involvement. The abdominal findings might easily go along with the perforation, ulceration or infarction of the gut so often found in polyarteritis nodosa. The lymphadenopathy, eosinophils and elevated sedimentation rate are also compatible. However this disease only rarely causes small mucosal lesions, and this patient had many of them. The laboratory studies were inconsistent with this disease, too. Leukocytosis is the rule, and anemia is often associated with it. Even before she became toxic, this patient had neither of those conditions.

A better possibility is systemic lupus erythematosis. The description of a blotchy rash over the patient's nose and below her eyes is quite suggestive of the butterfly rash characteristic of this disease, but in no way diagnostic of it. The progression of the dermatosis from the head to the trunk, and its bullous and hemorrhagic nature are often found in SLE, as are the ulcerations and involvement of the mucous membranes. Rheumatoid arthritis is often associated with, and is often mistaken for lupus. In 40 to 60 per cent of cases this is the presenting complaint. Often the rheumatoid flocculation tests are positive in this disease. Rheumatoid arthropathy may be very difficult to distinguish from SLE radiographically. The renal involvements of hematuria, proteinuria and azotemia are compatible with this disease, as is the hypertension that was recorded terminally. Cervical adenopathy, leukopenia, a thrombocytopenia and corneal ulcers all are common findings in lupus.

The possibility of an acute drug reaction must be considered. The patient's past history of generalized skin reaction following the administration of penicillin was a contraindication for the use of phenylbutazone. It should be given only after other drugs such as aspirin. A pruritic rash and a fever, followed by a severe stomatitis, a hemorrhagic and bullous rash, dysphagia, purulent conjunctivitis, an ulcerated cornea, prostration and generalized toxemia can occur in extremely severe variants of the Stevens-Johnson syndrome. Systemic manifestations occur, and can include pneumonitis, pulmonary consolidation and pleural effusion. Albuminuria, pyuria, hematuria and casts in the urine are not unknown. The leukocyte count may be diminished, and eosinophilia occasionally occurs. The platelet count may be greatly decreased. Secondary bacterial infections, especially of the eye, may be prominent. The mortality rate in severe cases is about 10 per cent. Phenylbutazone has been implicated in occasionally fatal erythema multiforme bullae. Bone-marrow suppression is a danger, and skin disorders often precede it by four to 14 days.

The rapid course and the previous skin reaction strongly suggest a systemic drug reaction with an overwhelming systemic infection. In retrospect, it seems that this woman might quite possibly have been admitted to her local hospital with a lupus arthritis which everyone thought was a rheumatoid arthritis. The analgesic phenylbutazone with which she was treated caused a reaction that resulted in her crisis. How much of it was due to the drug and how much was due to her underlying illness, one cannot say, except that, as has already been mentioned, either one can cause most of what led to this woman's death.

The fact that steroids had no effect in her disease points to the severity of her complications. She was given too little too late. By the time she was admitted to this hospital, she was toxic from her pneumonia, and the toxicity caused her flocculation test to be negative. Her bone marrow failed, and she died of an infection, Pseudomonas pneumonia, to which she could not react. We believe that the cause of her rapid downhill course was initiated by her ingestion of phenylbutazone.

Dr. Sheets: Maybe you mean too much too soon, rather than too little too late. Are there any questions for Miss Jones at this point?

Dr. Caplan will discuss the protocol for the staff.

Dr. Richard M. Caplan, Dermatology: I am impressed with the discussion that we have just heard. Miss Jones considered some things that I didn't, for I tended to fasten my gaze on some of the minute details in the description of the patient's cutaneous problem. You will have to forgive me for that; it is an occupational characteristic of dermatologists.

One reason why illness is unfortunate is that sickness has a perverse tendency to lead to more sickness. In other words, "one damned thing leads to another." That is what I think happened to the patient whom we are discussing today. As I read the protocol, I thought the first paragraph described someone who had rheumatoid arthritis and osteoarthritis. If something else were being disguised, it was being disguised very effectively. Then the middle paragraphs of the protocol told of something very dramatic and dreadful that happened to this lady—something that involved the skin, particularly, but also involved the hematopoietic system, the kidneys and the eyes to some extent. Then the final paragraph or two told of her developing a nasty pneumonia, almost certainly due to the Pseudomonas that was cultured, and then of her dying from that complication.

Now I should like to go back through the protocol and comment about a few things. The details in the first paragraph, I think, add up well to the notion that she had rheumatoid or mixed rheumatoid and osteoarthritis. Then she was hospitalized near her home and was treated with diathermy and heat and Butazolidin. That therapy went on for about two weeks, and then she began to get into trouble, as evidenced by a temperature spike. The discontinuance of the Butazolidin at that time suggested that perhaps the attending physician thought the patient was having some kind of adverse reaction to it. Then a couple of days later she developed "a rash." Beta Streptococcus was found in her throat culture, and that made me wonder whether she perhaps had scarlet fever.

At that point she was treated with Achromycin, presumably for an infection that was either known or presumed to be present. Then she received Medrol, and the protocol doesn't say whether that was Solu-Medrol or Depo-Medrol. There is an important difference. Since she received the drug every six hours, I suppose it was the soluble form of methylprednisolone, but I have seen some mistakes made in that regard. It is important to realize that if there is a need for immediate action one shouldn't use the repository or long-acting forms of the different steroid products.

The last part of that paragraph says that her eruption became bullous and was quite painful. I think it important that her skin hurt, for most of the time skin doesn't hurt. Then we are told that her macular rash was confluent, that bullae were present and that Nikolsky's sign was positive. This last is a very important detail. It means that something was devastatingly wrong with the epidermis—that it wouldn't stay put when one tugged at it. This sign—one with which you may not be familiar—refers to a "sliding" of the epidermis. If you exert lateral traction across the skin of such a patient, the epidermis peels away beneath your fingers.

Then the patient developed more trouble that began to point toward the terminal episode, trouble that centered around the pneumonia which almost certainly was present. Her hematopoietic system did not respond satisfactorily because, at the onset of the pneumonia, she had considerably decreased white cell and platelet counts. She died without having been treated with what might be considered an appropriate antibiotic, for you see that the sputum culture grew out Pseudomonas. It is possible that an appropriate medication, if we could have known one to use, might have controlled the pneumonia and permitted the lady to recover, if hers was an acute, relatively self-limiting episode of some kind.

Now was such actually the case? Was hers an acute, self-limiting illness? I think it was. I think that her acute crisis, with fever and rash, was a drug eruption, and that the Butazolidin probably was responsible. Then she was led into other troubles when steroids were administered in an attempt to combat her drug reaction. Perhaps the steroids made her less able to combat the infection when Pseudomonas began to take hold in her lung.

Now I should like to speak of some cutane-

ous disorders that I considered when I read this protocol. Some of these were mentioned by the previous discussant.

I must admit that I am not approaching this case with the ignorance that I ought to have as the discussant in a clinical pathologic conference. I remember being told some months ago that a patient with this sort of problem was in the hospital, and I caught a glimpse of her through the door. When a patient has this kind of disorder, a quick look from several feet away can be enough. However, I feel it may be instructive for me to go through the differential diagnosis just as I might if I knew no more about the case than has been provided us in the protocol.

First of all, let's consider acute lupus erythematosus. The combination of fever, "rheumatoid" arthritis, some sort of rash and leukopenia certainly make L.E. a legitimate possibility. However the description tells us of too many things that were going wrong in the skin. The cutaneous reaction was too violent—this business of having lots of blisters. Although blisters may occur in lupus, they are very uncommon. The Nikolsky sign and all the pain in the skin simply are not encountered as parts of the L.E. process.

True, pemphigus is the disease that classically exhibits the Nikolsky sign. In pemphigus the epidermis shears apart because its cells simply don't hang on to one another properly. But the course of pemphigus is not the acute, violent, febrile thing that has been described here.

Now we come to the confusion called erythema multiforme and Stevens-Johnson syndrome. I am not sure how much different these things are. The distinction is often a difficult one to make. Stevens-Johnson syndrome appears with great violence, toxicity, fever and the development of blisters, particularly at the orifices of the body—the mouth, nose, eyes, urethra, and anus. But also there are scattered lesions which are red, round or ringed, and which look like hives or erythema multiforme lesions. The latter may include central blisters, but the skin in general does not exhibit the Nikolsky sign, and neither is it usual for the patient to have cutaneous pain. A biopsy of the skin might have identified some of the previously mentioned disorders, but it would not have distinguished bullous erythema multiforme from Stevens-Johnson syndrome.

I have mentioned scarlet fever. Could she simply have had a toxic reaction to either the Streptococcus or the Pseudomonas infection? I think it is possible, but the description of the Nikolsky sign and the whole skin's sliding off is not the kind of thing that happens in any of the scarletiniform eruptions which occur as a result of bacterial or viral infections.

Could the skin problem have been infection of the skin itself? In other words, might this have been a pyoderma? It is certainly possible, but I think there was just too much happening. At least as I gather it, all of the skin was involved, and the Nikolsky phenomenon just isn't something that we see in cutaneous infections due to the ordinary pyogenic organisms.

Now there is another phenomenon called bullous drug eruption, or pemphigoid drug eruption, which may be close to what happened to this lady. Ordinarily it involves lots of blisters and maybe fever. With any kind of drug reaction there may be fever, and a decrease in both white count and platelets. At times such reactions can be very severe and even fatal.

Finally I am coming around to what I think really did happen to this lady. It is closely related to these things I have just been talking about, as far as drug reactions are concerned, but it is unique. Clinically it carries a special name that has been kicking around in the literature for several years. Its name is "toxic epidermal necrolysis," but it is also called "the scalded-skin syndrome." These names are merely descriptive, but they do a good job of describing the skin of such a patient. If anyone is interested in pursuing the subject further, here are references to a couple of recent articles that discuss it: ARCH. DERMATOL., 95:359 and 608, and BRITISH M. J., 2:802. Both were published in 1967.

I now should like to show you a few slides to illustrate this and related conditions. The first slide shows a child who was on the pediatrics service several months ago. She arrived with fever, and was obviously ill. She had a red skin, as you see, and she looked as if she had been scalded, or perhaps badly sunburned. The lesion looks very much like a burn of the skin. It was accentuated somewhat around the eyes and mouth, but it was generalized over the body, as you see in the next slide. The epidermis either was slipping off or could be made

to slip off in certain areas. The child got along all right and really didn't get terribly sick, although at times the affected children do.

Recent evidence suggests that, in children, anyway, some Group II Staphylococci cause the preceding infection, and then the infection —either cutaneous or upper-respiratory—gives rise to this particular type of severe cutaneous reaction. In adults it seems that the difficulty is more often a drug reaction than the result of some kind of infection. We surely don't yet understand the mechanism of such reactions. Toxic epidermal necrolysis, drug eruption, erythema multiforme, Stevens-Johnson syndrome—all of these things are cutaneous and systemic reaction patterns that may possibly be triggered by various inciting factors. Bacteria are one group of causative agents, drugs are another, and certain indigenous diseases are still another.

The next picture shows the peeling effect more dramatically. You see how the entirety of the epidermis is loose and has just slid off. It appears almost transparent, and looks as if the child were wrapped up in a loose-fitting, torn and crinkled plastic bag, or in a sheet of Saranwrap. After one slides away the epidermis from the involved skin, the exposed surface is actually the lower part of the epidermis. Living prickle cells and basal cells are then exposed. Consequently, the surface is moist and tender. This condition must be distinguished from a different kind of peeling which I shall show you soon. The next slide is a color photo taken from a published article. It again shows this very peculiar phenomenon in which the whole epidermis just comes away and slides off. In certain areas, small spaces may fill with fluids, and one can identify blisters grossly.

This next slide shows a peeling that may be seen in the drug eruptions called scarletiniform, or in a bacterially-induced eruption such as scarlet fever itself. It is most like the peeling that occurs after a sunburn. The epidermis doesn't slide off; in other words, there is no Nikolsky sign. Also, when this peeling has occurred, the skin is dry underneath, rather than moist and tender, for we have peeled off only the stratum corneum—the very outer layer of the epidermis.

This slide is from an article that appeared in JAMA (202: 710) which, in very fine color photography, shows an abundance of different kinds of cutaneous reactions that can be triggered by drugs—an acneiform eruption due to an iodide; a pemphigus-like bullous drug eruption; an eczematous reaction on the forearms; the scalded-skin syndrome that I just showed you; an erythema-multiforme type of ringed lesion; the red bumps on the shins called erythema nodosum; a generalized exfoliating dermatitis; a fixed drug eruption on the hand and on the tongue; an eruption that closely mimics lichen planus; a generalized eruption like that of measles (morbilliform); a peculiar pigmentation of the nailbeds due to an antimalarial drug; an eruption in the light-exposed areas induced by one of the several kinds of drugs that can cause photosensitization; purpura caused by a drug; granulomatous lesions caused by bromides; and, finally, some big hives. Of course the urticaria and morbilliform eruptions are the commonest of all. Penicillin is the most notorious cause, but almost any other drug can do something similar.

I didn't have a chance to elicit the Nikolsky sign from the patient under discussion, but Dr. Sheets' statement that the rectal examination had to be abandoned because the skin was coming off following manipulation made it clear that the patient had undergone a very dramatic occurrence of this phenomenon. I feel sure that the appropriate designation for this lady's problem is "toxic epidermal necrolysis."

I am inclined to blame it on the Butazolidin, although we don't have proof and unfortunately there is no satisfactory *in vitro* technic by which we can make certain. If a patient has survived an episode like this, and one wants to prove that a certain drug was responsible for it, I suppose he might give him the drug again to see whether the same thing happens, but anyone who would do such a thing is either braver or sillier than I am!

One of the articles to which I have referred included a summary of some 165 cases from the literature in which drugs had seemed responsible for producing the scalded-skin syndrome. Butazolidin happened to have been incriminated about 15 of the 165 times, and thus seemed a fairly common suspect. The total list included a wide variety of chemical classes, however, all of which appeared able to produce this type of cutaneous reaction.

In summary, I think that today's patient died of a nasty pneumonia that probably was due to Pseudomonas. The infection was a consequence of toxic epidermal necrolysis, and it, in turn, probably had been induced by Butazolidin, a drug which had been given her for her mixed type of arthritis.

Dr. Sheets: Dr. Cohen, please show us the x-ray.

Dr. W. N. Cohen, Radiology: The only significant radiograph taken at this hospital confirmed the clinical impression of pneumonia. There was an obvious infiltrate in the right lower lung, and I feel that it was predominantly in the right middle lobe.

Dr. G. R. Zimmerman, Pathology: I'll begin by saying that I sympathize with the junior students who missed the diagnosis. I don't consider it much of a miss, for most of the articles in the literature fail to clarify the distinction between Stevens-Johnson and bullous or severe forms of erythema multiforme—if in fact they are not all the same thing—and toxic epidermal necrolysis. It was only after talking with Dr. Caplan and his colleagues that we came to some final conclusions. The dermatologist makes the distinction on the basis of the type of lesion that he sees in the epidermis.

May I have the first two slides which Dr. Caplan lent to me? This is toxic epidermal necrolysis. The important feature is the edge of this blob. The elevated epidermis is necrotic, as is indicated by the absence of nuclei in the epidermal cells. That absence of nuclei is characteristic of toxic epidermal necrolysis. In contrast is this example of bullous erythema multiforme. The blister is very similar, but the epidermal cells are viable until late in the larger bullae, where they die secondarily. The problem of distinguishing these various lesions results from the fact that we can't be certain about the etiology of any of them, and from the fact that some 30 drugs, 3 viruses, mycoplasma, 8 bacteria, 2 fungi, 3 protozoa, allergies to some foods, poison ivy, malignancy, x-rays, vaccines, menses and pregnancy have been thought to cause the Stevens-Johnson syndrome.

Turning, then, to this patient, we note that she had extensive skin lesions over most of her body except for her legs, and that there even were a few lesions on her legs. Unfortunately by the time she died her skin lesions were not very active—i.e., there were no progressive skin lesions with fresh bullae—so that the only sections we could get at autopsy were of completely denuded skin. No biopsy was undertaken during the patient's lifetime because it was thought too hazardous.

She had involvement of the oral mucosa and of the esophagus, she had extensive denudation of the tracheal epithelium, and she also had bronchopneumonia, due in part to a concomitant aspiration which we can prove, as I shall show you in the photographs. From aspiration alone one would not expect such extensive loss of tracheal mucosa. As has been reported in other cases of this and the related disorders, there probably was pneumonitis and certainly a tracheitis as parts of her basic condition. The renal lesions probably were terminal. Thre was some early tubular swelling which could well have been related to her terminal bacteremia or septicemia, and may not necessarily have reflected her basic disease at all. You will recall that the urinary findings included evidence of some renal disorder, but I am not sure that those two factors were related to what we saw at autopsy.

The sections of the vertebral marrow and of the rib and femur all looked very much alike. The similarity of their appearance indicated that there was something wrong, for femoral marrow in a normal person is essentially fat without active marrow elements. There were approximately normal erythroid elements, very prominent myeloid elements, and a dramatic failure of maturation of the myeloid cells. Part of this may have been due to exhaustion as a consequence of the extensive skin lesions, but some of it probably was a maturation defect, the nature of which we do not know.

I should like to call your attention to the fact that on her first hospital admission this woman had a white blood cell count of 3,150/cu. mm. I question the advisability of giving a patient Butazolidin if he or she already has a leukopenia, since Butazolidin is found to depress the marrow in some individuals. Symptoms of arthritis have been reported in association with both the Stevens-Johnson syndrome and toxic epidermal necrolysis.

Dr. Butler obtained biopsies of the synovia of the knee, and they showed nothing specific

—possibly a little scarring, but no rheumatoid activity. Pseudomononas aeruginosae were found in the lungs and heart blood and spleen. Whether this finding represented just an agonal bacteremia, or whether it was a real septicemia is hard to evaluate. There is no question about the patient's having Pseudomonas bacteremia before death, but she had no abscesses in her spleen, kidneys and brain such as we would expect to find in a true case of septicemia. The differences between agonal bacteremia and septicemia are largely quantitative. Periodically everyone in this room has bacteremia, and the reason for its not developing into septicemia is that the bacteria are promptly eliminated from the circulation and kept from multiplying and producing an abscess.

Now let's go on to the remaining photographs. This is a section of the patient's skin, and it shows disappointingly little, as I warned you it would. There is a viable sweat gland in the upper left-hand corner; to the right is some skin surface devoid of epidermis; and there is a minimal acute inflammatory cell infiltrate just beneath the surface. There are also a few lymphocytes, for the process had been going on for some time. The next slide is a section from the ulcerated esophagus. This is fibrin lying in the lumen and on the base of very chronic granulation tissue. Here is a vessel with some very distinct fibrinoid degeneration. There were several other vessels like this one. I am not sure how to interpret this finding. It may signify some antigen-antibody reaction or hypersensitivity, but the vessel is so close to the ulcer base that it may represent no more than fibrin deposition in a damaged vessel wall. Notice the absence of neutrophilic leukocytes. One would expect a very intense neutrophilic leukocyte infiltration in someone with a normal peripheral count.

Next slide. This is a low-power view of lung tissue, to indicate that there was a bronchopneumonia with typical nodular or bronchiolar distribution, as you see. The next slide provides proof of aspiration. These round bodies are masses of vegetable cells. Here is a mass of squamous epithelium which looks almost viable. People don't ordinarily eat skin, but if this had been ingested as food, one would expect it to show more autolysis. Therefore I regard it as aspirated squamous epithelium sloughed either from the patient's esophagus or from her oropharynx.

Next slide. This is marrow. At this magnification it looks like essentially normal marrow from a vertebra or rib, but under higher magnification one notes a very striking absence of mature myeloid forms.

I neglected to mention some of the causes of these diseases. According to the articles I have read, no causative factor can be determined in

(For photographic reasons, the pictures on the facing page are not the ones mentioned in the text.)

Figure 1. Toxic epidermal necrolysis. The redness, the blistering and the characteristic peeling that reveals a raw, moist surface show why this has been called the "scalded-skin syndrome." This instance was probably due to a sulfa drug.

Figure 2. Generalized exfoliative dermatitis due to an arsenical. Newer drugs have replaced arsenic as the cause of this rare but serious reaction.

Figure 3. Urticaria. Hives are a common manifestation of drug sensitivity. Penicillin is especially likely to be the cause of giant lesions like these.

Figure 4. Morbilliform drug eruption from novobiocin. This is a common reaction pattern, and may be caused by almost any drug.

Figure 5. Purpuric drug eruption due to Butazolidin. Morbilliform eruptions may show a petechial element, especially on the lower extremities, without any generalized disturbance of platelets or clotting mechanism.

Figure 6. Phototoxic eruption from demethylchlortetracycline. This antibiotic causes an exaggerated sunburn reaction in most patients who take the usual dose of 600 mg./day and expose themselves to abundant sunlight. Sulfonamides, phenothiazines and thiazide diuretics can also produce this kind of disturbance.

Figure 7. Fixed drug eruption from sulfamethoxypyridazine. Phenolphthalein, sulfonamides and barbiturates are the commoner offenders in producing swollen, red areas which sometimes become blistered and raw. "Fixed" refers to the peculiar phenomenon of recurrence in the same loci following repeated administrations of the drug. As with all drug eruptions, cross-sensitivity may cause the reaction to be elicited by a different drug which is chemically similar to the original offender.

Figure 8. Acneform eruption due to inhalation of hydrobromic acid in a chemistry laboratory. Bromides, and especially iodides, produce follicular papules and pustules in the "acne areas." The bromides are more likely to cause chronic granulomatous lesions of the lower extremities.



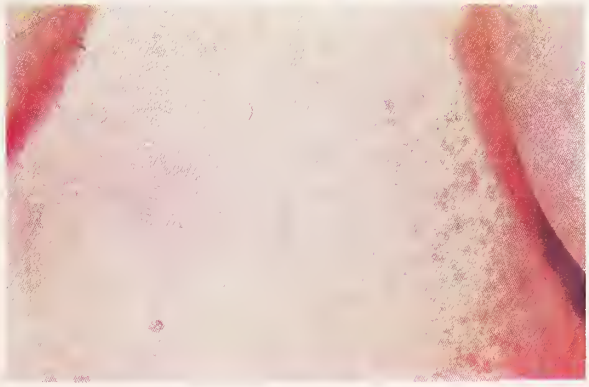
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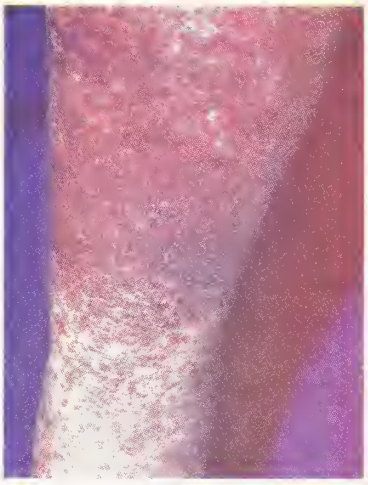
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about a fifth of the patients with toxic epidermal necrolysis.

In very quick summary, I should say that toxic epidermal necrolysis is a disease involving mainly the skin. Perhaps in the degree to which this patient had it, it is fatal as a result of secondary infections and fluid losses. This woman also had involvement of the oral mucosa of the esophagus, probably of the tracheobronchial tree, and probably also of the lungs. Since there was aspiration, it is difficult to separate aspiration pneumonia from primary lesions of toxic epidermal necrolysis.

I should attribute her death to a combination of the skin lesions and the pulmonary lesions, and possibly also to the Pseudomonas septicemia.

Student: What should have been done if the diagnosis had been made?

Dr. Caplan: I think the diagnosis of toxic epidermal necrolysis *was* made.

In general, the treatment must consist of large doses of steroids and generous amounts of supportive care. The latter would include special attention to fluid balance and the prevention and/or control of infection, much as it does in the case of a patient with a generalized thermal burn.

If this lady were to have been saved, it would have been through a more heroic and pertinent kind of attack on her infection, but such an attack would have necessitated our having more specific information about the organism we were fighting. When the identity of the organism was established, the patient was already dead. The erythromycin she received was too little and too late, and it was not the best choice anyway, as we discovered in retrospect. Older patients go downhill awfully fast from this sort of problem, and the mortality rate in adults tends to be somewhere between 25 and 50 per cent.

Questioner: Is there usually an element of purpura with this eruption?

Dr. Caplan: No, but any time the skin has suffered a very profound inflammation, there may be some hemorrhage from the tiny upper-dermal capillaries. The considerable depression of this lady's platelets might have made her more likely to have a petechial component in her eruption than would otherwise have been the case.

I am not sure why Miss Jones said that the patient's reaction to penicillin on a previous occasion precluded giving her phenylbutazone. Was she merely generalizing—saying that because the patient had had an adverse reaction to one drug, she therefore should never be given any other drug? Or was she following a dictum that I haven't run across—one which says that penicillin-sensitive patients should not take phenylbutazone?

Miss Jones: We are told that phenylbutazone should not be used in treating anyone who has a history of an allergic reaction to any drug.

Dr. Caplan: I can't buy that. Who says so?

Dr. J. L. Spratt, Pharmacology: The manufacturer says so.

Dr. Sheets: We have approached the discussion of this patient from the clinical and descriptive standpoints. Now Dr. Spratt is going to take a different point of view.

Dr. Spratt: Imagine that I am carrying a big poster on which is lettered: "Speculation." I come to this CPC with a lot of ignorance. But I feel very comfortable, since we all have a lot of ignorance when we attempt to discuss this type of occurrence at a mechanistic level. The entire medical community is in that situation.

I am tempted to reiterate Miss Jones's "too little too late," and with it Dr. Sheets' rejoinder "too much too soon." From 10 to 45 per cent of patients on phenylbutazone are reported to exhibit various toxic side effects following two weeks of ordinary therapy. After only one week of ordinary therapy the incidence is supposed to be about 10 per cent, and in one large series about 5 per cent of the patients on chronic therapy with phenylbutazone had some kind of skin manifestation. The chances of some toxic side effects—and I am talking about *toxic side effects,* not idiosyncrasies, hypersensive phenomena, etc.—are quite high, and the company which manufactures the drug recommends no more than a one-week course of the normal dose before giving the patient a thorough reevaluation. The firm likewise recommends using it for no more than one week at a time.

Now of the 10 drugs which this lady was given, I tend to incriminate the first two. I cannot say whether it was aspirin or phenyl-

butazone that got things rolling, but I tend to suspect phenylbutazone. Aspirin may have played a role, too, but let's look at phenylbutazone alone, and in the light of what I have already said, let us consider what might have happened.

Two weeks of the usual dosage of pheylbutazone were given to a patient who had reached the border of old age. Thus she received more than the recommended course. Phenylbutazone induces microsomal enzymes in the liver, and thus can increase its own and other drugs' metabolism. But what is it metabolized into? It is metabolized into oxyphenbutazone, which many people presume to be the active metabolite of phenylbutazone. That may be a more toxic drug than the parent compound. So the patient then may have had an even greater dose of toxic material because her enzyme system converted the phenylbutazone into an even more potent drug. In addition, phenylbutazone is said to stimulate the formation of enzymes that metabolize steroids. But both phenylbutazone and oxyphenbutazone are very tightly and extensively bound by tissue and blood proteins, and they compete with steroids for those binding sites.

Therefore we have the possibility that this very large accumulation of oxyphenbutazone (for it is not readily excreted) could have displaced the steroids from the binding sites, leaving the steroids present in unbound form. At the same time these unbound steroids are more susceptible to hydroxylation by the enzymes that have been induced by the drug. These steroid products are then available for urinary excretion. I cannot say whether the exogenous steroid therapy given this patient would have been handled in a similar way, for as far as I know the requisite experiments have not been done. But it is conceivable that both the patient's endogenous steroids and the exogenous therapy given to her were relatively ineffective in treating her skin problem because of this peculiar course of events.

In summary, phenylbutazone can create skin problems. It can precipitate nephritis. Certainly the patient's dysphagia fitted with her skin problem. One cannot know how much the presence of the beta Streptococci had to do with her pharyngitis or her subsequent course. The peripheral blood picture could have been produced by the phenylbutazone. One would not see it early at the periphery, but it would have been nice to have a bone marrow somewhat earlier. Likewise it might have been interesting to have some idea of her urinary-steroid output. Those latter two things would have been of interest to us pharmacologists. We also know that there are genetic influences upon drug metabolism.

All of the foregoing has been speculation. However there are pieces of evidence that could be marshalled to support the possibility that essentially this lady had a massive course of oxyphenbutazone, and that it produced skin, kidney and bone-marrow problems. At that same time the oxyphenbutazone could have wiped out the effect of her steroid therapy because of the sequence I just outlined. I don't know whether any additional steroid therapy would have overcome those effects.

I am not sure that these statements explain everything, but such a course of events may be a possibility.

Dr. Sheets: Many patients experience some untoward effects—some complications—that are brought on by the use, overuse or misuse of a drug. Dr. Richerson is going to tell you about the hypersensitivity mechanisms for drug-produced disease.

Dr. Hal B. Richerson, Internal Medicine: I shall start with a couple of critical comments. First, the evidence that this patient actually had rheumatoid arthritis is meager. She had acute hip pain and low-back pain, and a radiologist made the diagnosis of "hip changes compatible with rheumatoid arthritis." There is no mention in the protocol of peripheral-joint disease, morning stiffness or the other clinical manifestations of rheumatoid arthritis. The latex test, which uses human rather than rabbit gamma globulin, is frequently positive in the older age group, and cannot be considered strong evidence for rheumatoid arthritis in our patient. The sedimentation rate was initially normal. My second point is that the patient probably died of gram-negative septicemia with endotoxin shock. That condition requires intensive treatment, and might have been better anticipated.

As for reactions to phenylbutazone, it is worth noting that one of the four original patients described by Alan Lyell as having toxic

epidermal necrolysis had received phenylbutazone. That patient's case had several other features which resemble those of the patient under discussion today. I think there is little doubt that phenylbutazone was responsible for the presenting illness in both patients.

Once the decision has been made that the reaction is due to a drug, one must attempt to classify the type of adverse drug reaction.

Dr. Spratt spoke of the possibilities of toxic reactions resulting from overdosage or metabolic changes. Other patients may have an idiosyncratic reaction because of some specific enzymatic deficiency, or may react adversely because of an underlying disease. I don't think that our patient experienced either a toxic or an idiosyncratic reaction, but rather, that she had a hypersensitive response to the drug.

What type of hypersensitive reaction? There are four types according to Coombs and Gell. The first is *local or systemic anaphylaxis* with antibody attached to cells which contain pharmacologic mediators and which respond to the presence of antigen (such as a drug) by firing off pharmacologic mediators (histamine, serotonin, slow-reacting substance or plasma kinins) without damage to the cell itself. The clinical reaction may be asthma or urticaria or generalized anaphylaxis. Our patient did not experience that type of reaction.

The Type II reaction is termed *cytotoxic or cytolytic,* and in such a case the cell is damaged by the reaction. A drug-altered cell may be antigenic, or a drug may be attached to the cell, making the cell surface antigenic. Antibody combines with the cell, fixes complement and destroys the cell. A common clinical disorder illustrating this type of reaction is acute hemolytic anemia, and other reactions include agranulocytosis and thrombocytopenia. Our patient probably was an example of this type of hypersensitivity reaction. Perhaps the epidermal cells are involved in binding Butazolidin; they may cross-react with Butazolidin; or possibly Butazolidin is secreted by sebaceous glands and becomes attached to these cells. The severe necrolysis of the epidermal cells would then result from the action of antibody on the antigen bound to the cells, from fixation of complement and from destruction of the cells.

A Type III hypersensitivity reaction, *the serum sickness type,* is due to circulating antigen-antibody complexes which precipitate out in strategic spots—usually in the blood vessels —causing a widespread vasculitis. This usually affects the kidneys, producing an acute nephritis. Pathologically there was little evidence of vasculitis in the patient under discussion, so perhaps this case was not a serum sickness reaction, although the time sequence fitted very well.

Another possibility which may involve a Type III reaction is disseminated intravascular coagulation (generalized Schwartzman reaction). Antigen-antibody complexes may activate vasoactive peptides, and these in turn are capable of activating the clotting system. Pathologically one would expect renal cortical necrosis and evidence of thrombi in the glomeruli and perhaps in the adrenal glands, but no such pathologic findings were reported in our patient. Therefore, a generalized Schwartzman reaction does not seem to have been a part of her problem.

The final type of hypersensitivity reaction, Type IV, *delayed hypersensitity or cell-mediated hypersensitivity,* is associated with contact dermatitis, the tuberculin reaction and homograft rejection. Many different types of dermatitis may involve the delayed hypersentitivity mechanism. This is difficult to study, and what role it may have played in our problem it is impossible to say.

Summarizing, then, we can say that in the absence of vasculitis or evidence of intravascular coagulation, the type of hypersensitivity reaction responsible for the condition under discussion today was the Type II or cytotoxic reaction. Much more work remains to be done before this conclusion can be substantiated. The usefulness of thinking in terms of cellular and molecular mechanisms, when one is confronted with a drug reaction, is something that I want to emphasize. Rather than being satisfied with "drug reaction" as a diagnosis, we should attempt to define the specific type of hypersensitivity as accurately as possible. As more progress is made in understanding the pathogenesis of drug reactions, classification will lead to important clinical and therapeutic implications.

SUMMARY OF NECROPSY FINDINGS

1. Toxic epidermal necrolysis involving the skin and mucous membranes of the nose, oropharynx, esophagus and conjunctivae
2. Hypoplasia of the myeloid series (maturation failure)
3. Bronchopneumonia due, at least in part, to aspiration of gastric contents
4. Cloudy swelling of the renal convoluted epithelium
5. Endometrial polyp
6. Mammary dysplasia, inactive.

STUDENTS' DIAGNOSIS

Stevens-Johnson syndrome secondary to phenylbutazone.

DR. CAPLAN'S DIAGNOSIS

Toxic epidermal necrolysis secondary to phenylbutazone.

Peanut-Oil Base Will Add Effectiveness to Flu Vaccine, but Not This Year

Protective antibodies against the new Hong Kong flu virus have been found in blood samples from a group of patients vaccinated last winter with specially prepared lots of flu vaccine, a Pennsylvania virologist reported in Kalamazoo, Michigan, October 15.

The experimental vaccine, using last year's formula but prepared in a special peanut oil adjuvant instead of the conventional aqueous solution, evoked protective antibodies against the new strain of flu virus in more than half the patients tested, according to Dr. Maurice R. Hilleman of the Merck Institute for Therapeutic Research, West Point, Pennsylvania. He pointed out that antibodies against the Hong Kong strain were almost non-existent in blood samples of patients who received the conventional aqueous vaccine, and in those of another group of unvaccinated patients who were studied for comparison.

The several other authors of the paper were: Drs. Joseph Stokes and R. E. Weibel of the Department of Pediatrics at the University of Pennsylvania; Dr. L. A. Potkonski of the Pennhurst State School and Hospital, in Spring City, Pennsylvania; and Drs. A. A. Woodhour and W. J. MacAleer of the Merck Institute.

Dr. Hilleman explained that both the peanut oil adjuvant (called adjuvant 65) and the conventional vaccines contained the same amount and types of virus. The adjuvant vaccine was administered in one dose to one group of 36 patients and in two doses to another group of 36. The conventional, or aqueous, vaccine was administered in a single dose to one group of 37 patients and in two doses to a second group of a similar number. Thirty-nine patients, susceptible to flu infection when the trial began, were studied as unvaccinated controls.

Examination of blood samples taken two months after vaccination revealed that 20 (56 per cent) of the 36 receiving two doses of the adjuvant vaccine had produced protective antibodies against the Hong Kong strain; as did 5 (14 per cent) of the 36 receiving a single dose. Of the 37 receiving a single dose of the aqueous vaccine, only 1 patient (3 per cent) produced antibodies against the new flu strain, and none of the group receiving two doses of that vaccine exhibited antibodies against the Hong Kong strain.

While both types of vaccine stimulated antibodies against older flu strains in almost all patients vaccinated in the test, antibody levels were about four times higher in those patients who received the adjuvant vaccine, Dr. Hilleman pointed out. He attributed the production of antibodies against the Hong Kong strain to the capacity of the adjuvant to bring about a broadening of antibody coverage against antigenically diverse strains that are within a single subgroup of viruses (A_2).

The adjuvant vaccine, the virologist said, is currently undergoing evaluation by the Division of Biologics Standards of the National Institutes of Health. He explained that it would probably not be available for application in the crash program now going on to produce a monovalent vaccine against an impending Hong Kong Asian flu epidemic, but that it did provide promise for broadening the capacity of vaccines to alleviate the severity to high risk and elderly groups brought about by periodic antigenic shifts in the flu virus, which reduce or eliminate the vaccine's effectiveness.

Explaining how the vaccine works, Dr. Hilleman said that the antigen is bound in a water-in-oil emulsion which provides a repository for slow release of antigen and for its wide distribution to the antibody producing centers of the body, thereby causing the body immune mechanisms to produce more antibody for a longer period of time.

In addition to peanut oil, adjuvant 65 uses mannide monooleate as the emulsifier and aluminum monostearate as a stabilizer; all of these ingredients, he pointed out, are relatively metabolizable and, hence, removable by the body mechanisms, and all have enjoyed the precedent of long-term use in man.

President's Page



The series of Conferences on Medical Manpower held this fall has brought into sharp focus the problems of manpower facing our state in the immediate and distant future.

Dr. John MacQueen, Associate Dean of the College of Medicine at the University of Iowa, is to be commended for the excellent job of researching he has done on the subject and the effective way he has presented it at the various meetings.

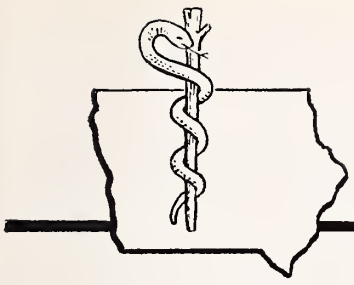
In studying Doctor MacQueen's material, one is quickly impressed with the fact there is more to the solving of the manpower problem than increasing the number of physicians educated in the state.

At the present time, the number of physicians per capita educated in Iowa is at or above the national level. However, the physician who is educated in Iowa and then leaves to practice elsewhere does not help to solve our problem.

It therefore behooves every Iowa physician to sell his state to every young physician as a good place in which to live and practice medicine.

C. W. Talbot, M.D.

President



Editorials

THANKSGIVING THROUGHOUT THE YEAR

The annual day of Thanksgiving in this country is not far distant. As this holiday approaches it should be a time of reflection for every American, and in this era it calls for a wholesome perspective rather than a circumscribed view of the ills which beset the nation and the world.

With but relatively few exceptions American citizens have much to be thankful for, and for those who are privileged to live in Iowa, a land of beauty and of plenty, this is particularly true.

In a consideration of one's blessings, material possessions are often accorded too important a role. Rather than emphasis on things, one should give thanks for each new day, for loved ones, for friends, for beauty both seen and heard, for health, and for the opportunity to serve others according to one's ability and capacity.

Blessed are they who see cause for thanksgiving not just on one special day, but on each day throughout the year. Seek and you will find.

ANTIBACTERIALS IN URINARY INFECTIONS

In a recent article on the use and abuse of antibacterials in urinary infections, Robert A. Garrett, M.D., professor and chairman of the Department of Urology at the Indiana University Medical Center, Indianapolis, offered some guidelines which should be helpful to the practicing physician in the management of a common problem.*

He listed 19 drugs which are available for urologic antibacterial use, and he points out that such a wide choice is not an unmixed blessing. A broad choice of therapeutic agents has often resulted in an insufficient understanding of the weaknesses and the potentials of each one of them. He emphasizes that before initiating therapy and before selecting a particular drug, one must have valid evidence of the existence of infection. Prescribing drugs solely on the basis of a past infection or on poorly obtained urine specimens, particularly in the female, constitutes an abuse of drug therapy.

According to Dr. Garrett, the factors which influence the choice of drugs in urinary infections should be:

1. Organ involved
2. Intensity of infection—acute or chronic
3. Smear findings
4. Culture and drug sensitivity
5. Past experience with the drug (effectiveness or allergy)
6. Presence or absence of obstruction or stasis
7. Presence of a foreign body
8. Renal function
9. Drug cost and mode of administration
10. Length of treatment contemplated.

In relatively uncomplicated and minor lower-urinary-tract infections, the simpler and cheaper drugs such as the sulfonamides, or urinary acidifiers with mandelamine, suffice, whereas in infections which involve the upper urinary tract, with systemic manifestations, more potent and specific therapy is necessary.

In the selection of a drug, the prime factor

* Garrett, R. A.: Use and abuse of antibacterials in urinary infections. J. INDIANA M. A. **61**:612-613, (May) 1968.

is its effectiveness against the offending organism. The identification of the bacterial invader is essential in the more serious types of infection. The factors which influence the effectiveness of an antibacterial agent, according to Dr. Garrett, are:

1. Bacterial sensitivity
2. Route of administration
3. Route of elimination
4. Blood level
5. Protein binding
6. Chemical splitting
7. pH of the urine
8. Duration of treatment
9. Dosage.

He pointed out that most strains of Escherichia coli, in the absence of stasis, respond to most of the available drugs, and the choice of drug depends upon the severity of the infection and its location. Proteus strains are usually susceptible only to ampicillin and kanamycin. Pseudomonas infections, which are often associated with stasis or catheterization or secondary invasion, are usually resistant to most of the available drugs, but may be susceptible to the polymixin group. Difficult infections demand culture-sensitivity testing for the physician's guidance in selecting the proper drug.

It is emphasized that the treatment of recurrent infections is quite often different from the treatment of chronic infections. Recurrent infections usually require short periods of therapy along with eradication of the source or cause of the infection. Chronic infections may require intensive and extensive therapy over many weeks or months. The mode of entry of the offending organism, when it can be recognized, may influence the drug choice. The recurrent marital "cystitis" usually calls for a drug which attains significant antibacterial levels in the urine but not in the tissues of the kidney. Long-term, low-dosage Furadantin will often suffice to control recurrent contamination of the urethra and bladder.

The author states that the majority of recurrent infections in female children and women are reinfection, rather than chronicity. Therefore this calls for a careful search for structural abnormalities such as ureteral reflux before one institutes drug therapy. There may be a justification for long-term, low-dose drug therapy in young girls with ureteral reflux based on the premise that reinfection can often be prevented by effective urine drug levels. As a matter of fact, in some children the reflux will cease and drug therapy will no longer be necessary. A second infection in female children warrants both a urologic and a radiologic study. In boys, a first infection demands prompt investigation, rather than complete reliance on drug therapy, because of the high incidence of congenital anomalies producing urinary stasis.

Attention must be given to renal function in the drug therapy of urinary-tract infection. In patients with renal azotemia, drugs normally excreted by the kidneys may rapidly reach toxic levels. Adjusting the pH of the urine to a level favorable to the specific action of a drug may be helpful in controlling the infection. Acid urine may enhance the antibacterial effectiveness of mandelamine, nitrofurantoin, tetracycline and nalidixic acid. Streptomycin is more effective in an alkaline urine.

The Indianapolis urologist lists the following common errors in the use of antibacterial agents:

1. Use of the wrong drug
2. Wrongful usage in viral and other unresponsive diseases
3. Inadequate dosage
4. Neglect of drainage—surgical, etc.
5. Failure to discontinue drug in the face of toxicity
6. Excessive attraction to new drugs
7. Treatment of fever empirically, with a high incidence of neoplasia, etc.
8. Use of overly expensive drugs
9. Unsupervised drug usage
10. Excessive demand by family or patient
11. Use of route of administration incompatible to patient.

He states that perhaps the most difficult thing to avoid is the misuse prompted by excessive demand on the part of the patient or the parent. Although new drugs offer much for the future control of infections, there is too great a tendency for physicians to use them now.

Obviously the choice of drug in the management of urinary-tract infections is no simple matter. It requires a serious consideration of the many factors that Dr. Garrett has emphasized.

PESSIMISM AND OPTIMISM REGARDING OSTEOPOROSIS

As a result of increased longevity and the resulting increase in the numbers of elderly people, the problem of osteoporosis often confronts the clinician. Even the layman is aware of the shortened stature, the stooped posture and the kyphosis which is observable in his aging friends, and he also knows of spontaneous fractures and fractures resulting from slight trauma in such people.

In a recent article entitled "Diet and Osteoporosis," Wachman and Bernstein, of the Harvard Medical School, have advanced a new explanation for the development of osteoporosis with age.* They define osteoporosis as an absolute loss of bone substance, and they point out that from infancy through puberty there is an increase in bone mass, but that beginning in the fourth decade and continuing throughout life there is a gradual and steady decline. X-ray evidence of clinically detectable osteoporosis has been estimated to occur in about 25 per cent of women and 5 per cent of men over the age of 60, and the incidence increases with age.

Many hypotheses have been advanced to explain the inevitable loss of bone mass with age. It has been ascribed to gonadal dysfunction, to a diminished calcium intake, and to physical immobility. Though those factors may aggravate the severity of the disease, none of them has provided an adequate explanation for the relationship between osteoporosis and age. Thus most cases are described as idiopathic.

The authors submit a hypothesis to explain the increased incidence of osteoporosis with age. They postulate that it may, at least in part, be the consequence of a lifelong utilization of the buffering capacity of the basic salts of bone in order to maintain pH homeostasis.

It is pointed out that the phosphate-buffer system is a major blood and urine buffer system, and one of the methods that the human organism utilizes to rid itself of fixed acids and to maintain the body pH within very finite limits. Omniverous man usually excretes an acid urine, whereas his vegetarian counterpart excretes an alkaline urine. Diets in the Western Hemisphere usually include a considerable portion of meat, which is a primary source of acid ash. Thus the urine pH in this part of the world usually is distinctly acid.

According to the authors the relationship between this condition and the increasing loss of bone mass with age appears inescapable. Though the extent of the loss may appear extremely small from day to day, the loss of as little as 2 mEq. of calcium per day, which is enough to buffer 1 mEq. of fixed acid per day, during the course of a decade would account for a 15 per cent loss of inorganic bone mass in an average individual.

The variations in clinical manifestations of osteoporosis at a given age in different individuals can be ascribed to inequalities in total bone mass and to the extent to which the individuals call upon bone to serve as a buffer in the maintenance of homeostasis. This may explain the increased incidence of osteoporosis among females, and the lower incidence in Negroes.

In support of their thesis, Wachman and Bernstein pointed out that bone responds to an acid load by dissolution of its basic salts. In various pathologic conditions there is a dissolution of bone, a liberation of its basic buffering salts, an elevation of serum pH, and a metabolic alkalosis. The osteodystrophy which so frequently accompanies renal disease may be a result of the use of bone as a buffer to neutralize the excretion of fixed acid.

They conclude that the definitive treatment of osteoporosis must await a fuller understanding of its etiology. They suggest that as a preventive measure it may be worth while to decrease the rate of bone attrition through the use of a diet favoring alkaline ash, particularly in individuals with conditions in which the long-continued loss of bone mass appears probable.

In a subsequent communication, Pellegrino and Biltz, of the State University of New York, have questioned the above-outlined hypothesis.†

* Wachman, A., and Bernstein, D. S.: Diet and osteoporosis. LANCET, **1**:958-959, (May 8) 1968.

† Pellegrino, E. D., and Biltz, R. M.: Diet and osteoporosis (in Letters to the Editor). LANCET, **2**:219, (July 27) 1968.

As a result of their studies, they assert that it is highly unlikely that gradual dissolution of phosphate salts can account for osteoporosis. Their evidence suggests that the major buffer base in bone is calcium carbonate, not calcium phosphate. In their study of uremic patients they could not demonstrate a significant change in the amount of calcium phosphate. In patients with chronic acidosis, and in experimentally-induced acute acidosis, the major buffer base in bone was calcium carbonate. They studied the calcium carbonate and calcium phosphate contents of bone in a number of patients with senile and disuse osteoporosis, and in animals with osteoporosis of various types. Little change in the calcium carbonate fraction was found in senile and disuse osteoporosis, and the chemistry of the remaining bone appeared to be quite normal. In some types of human osteoporosis there were changes in the calcium carbonate fraction, but there was no selective loss of calcium phosphate.

A recent article from the Mayo Clinic reports the experience of a woman 33 years of age with a 10-year history of osteoporosis accompanied by numerous fractures after slight trauma.‡ She was treated with sodium fluoride, a high-calcium diet and vitamin D for 2½ years. Bone biopsy specimens were taken before and after treatment, and quantitative studies of bone turnover were made. It was concluded that the effect of fluoride was a stimulation of bone formation, and that new bone tissue appeared to be normally calcified. There was an increase in bone mass during the period of treatment. The Mayo investigators said: "One indisputable and important point can be made: The process of osteoporosis is reversible, at least in persons of this age. The resorption can be depressed and the formation can be stimulated to produce a skeleton with an increased amount of bone." They concluded that while the treatment of osteoporosis with fluoride should be regarded as at no more than an investigative stage, the case reported and the experience of others with similar treatment in three cases, suggest that it may be a useful therapeutic agent.

Still another article, by Shambaugh and Petrovic, concludes with the statement: "The time may not be far distant when fluoride will be recognized as essential to health and when, in addition to being added to the water supply where deficient, it will be prescribed to older persons to prevent senile osteoporosis and frequent fractures."§

It is encouraging to know that young scientists are eagerly searching for the cause and for an effective therapy of osteoporosis. Lines of pursuit suggest both a preventive and a therapeutic approach to this puzzling entity.

‡ Jowsey, J., and Kelly, P. J.: Effect of fluoride treatment in patient with osteoporosis. PROC. STAFF MEET. MAYO CLIN., **43**:435-443, (June) 1968.

§ Shambaugh, G. E., Jr., and Petrovic, A.: Effects of sodium fluoride on bone. J.A.M.A., **204**:969-973, (June 10) 1968.

CHOLECYSTOSTOMY

A report of 15 years' experience with cholecystostomy at Multnomah Hospital, Portland, Oregon, by surgeons from the University of Oregon Medical School is an enlightening one, deserving the attention of both surgeon and clinician.*

Prefacing their report, the authors point out that there is general agreement that cholecystectomy is the procedure of choice when an operation is required in the treatment of acute cholecystitis. Cholecystostomy is usually performed only when the condition of the patient is grave, and survival is questionable. Thus the indications for cholecystostomy are relative, and depend not only on the clinical condition of the patient but also on the skill, experience and philosophy of the surgeon.

Ordinarily it is necessary to consider cholecystostomy in the management of acute cholecystitis only in elderly, poor-risk patients. In this age group the disease is characteristically more severe and is often superimposed on a preexisting or concurrent illness. It is recognized that geriatric patients tolerate emergency

* Gingrich, R. A., Awe, W. C., Boyden, A. M., and Peterson, C. E.: Cholecystostomy in acute cholecystitis: factors influencing morbidity and mortality. AM. J. SURG., **116**:310-315, (Aug.) 1968.

cholecystectomy poorly, and that the mortality rate in emergency cholecystectomy is twice that of the same operation performed as an elective procedure. Thus, *planned cholecystostomy* has been advocated in order to avoid the high mortality of emergency cholecystectomy in selected high-risk patients with cholecystitis.

At the Multnomah Hospital the general policy has been to avoid emergency cholecystectomy unless the patient is in good condition and free of serious associated disease. It is emphasized that this policy is very different from one which stresses the use of cholecystostomy only in desperate situations. Following this principle, cholecystostomy has been the initial surgical treatment for acute cholecystitis in more than one-third of the patients operated upon for this disease during the 15-year period 1952 to 1967. The report by the Oregon surgeons is an analysis of their experience with cholecystostomy in their treatment of acute cholecystitis during the period of study.

A total of 585 patients with acute cholecystitis were admitted to Multnomah Hospital during the 15-year period. Of this number, 323 were treated surgically, and 114 (35 per cent) underwent cholecystostomy as the initial surgical treatment. The group of 114 patients consisted of 65 women and 49 men, and the average age was 70 years.

Eighty of the 114 patients had simple acute cholecystitis with no clinical evidence of associated disease of the biliary tract. In 51 of the 80 patients the gallbladder disease was of such severity that cholecystostomy was the procedure of choice; in 25 of the group acute cholecystitis was associated with another life-threatening disease; and in 4 patients cholecystostomy was done for purely technical reasons.

In 34 of the 114 patients cholecystostomy was performed for cholecystitis associated with other disease of the biliary tract or adjacent organs. In 11 there was evidence of acute pancreatitis; 10 of the group had cholangitis with jaundice and common duct stones; in 4 an empyema of the gallbladder was present; in 7 patients cholecystitis was complicated by tumors of the gallbladder or biliary tree; and various associated lesions were encountered in 6 patients.

In the group of 80 patients with simple acute cholecystitis who underwent cholecystostomy, 16 died—a mortality of 20 per cent. Of the 51 patients in whom the gallbladder disease was of such severity that cholecystostomy was the operation of choice, 8 died, a mortality of 16 per cent. In four of the eight patients who succumbed, there was a perforation of the gallbladder, and in the other four it was acutely inflamed or gangrenous. Deaths were ascribed to pneumonia and wound dehiscence, or to sepsis. In the group of 25 patients in whom acute cholecystitis was associated with other life-threatening disease, there were eight deaths, or a mortality rate of 32 per cent. Death was caused by the associated disease in six patients, and by gallbladder disease in two. Sixteen deaths (47 per cent) occurred in the 34 patients subjected to cholecystostomy for acute cholecystitis associated with acute pancreatitis, cholangitis with jaundice, common duct stones and empyema of the gallbladder, or with tumors of the biliary tree. The operative mortality in the entire group of 114 patients was 24.6 per cent. Non-fatal complications occurred in 19 per cent. By contrast, during the same 15-year period 209 patients underwent cholecystectomy for acute cholecystitis at intervals which varied from a few hours to a week or more after admission. The age distribution of those patients was very similar to that of the group treated by cholecystostomy. The mortality in the cholecystectomy group of patients was only 4 per cent. There were no deaths in the 36 patients who were subjected to interval cholecystectomy.

An analysis of the 16 deaths among the 80 patients with simple acute cholecystitis revealed that 10 of the deaths could be ascribed to the use of general anesthesia and to large exploratory incisions. Deep general anesthesia and exploratory surgery are recognized as being unusually hazardous in toxic, acutely ill patients. In retrospect, the authors thought that seven of the 16 patients who died after cholecystostomy for simple, uncomplicated cholecystitis might have survived had the operation been done under local anesthesia. It was concluded that perhaps the main reasons for using general anesthesia and long incisions were underestimation of the risk involved, lack of a secure preoperative diagnosis and an obese or uncooperative patient. Ideally, cholecystostomy should be done under local an-

esthesia, and long incisions and broad abdominal exploration should be avoided.

In the study, when postoperative tube cholangiography was done and revealed no abnormality, 61 per cent of the patients remained asymptomatic for periods which ranged up to 14 years. However those patients in whom cholangiography revealed stones usually experienced further difficulty. Among those in whom stones were left in the common duct, there was a high incidence of cholangitis, whether or not cholecystostomy drainage was maintained.

From their experience the authors concluded that "planned cholecystostomy" under local anesthesia has an important role in the treatment of acute cholecystitis.

In a discussion of the report, Dr. James Mark, of San Jose, California, made the following pertinent remarks. They deserve the special attention of the practicing physician: "We must somehow familiarize our medical colleagues with the ravages of acute cholecystitis in the aged patient. The treatment of the patient, once we receive him under these circumstances, requires, as noted by the authors, exquisite judgment. I think, however, that our medical colleagues must make some difficult decisions earlier in these patients' lives by referring to us the relatively asymptomatic patient who has gallstones, in order to prevent acute cholecystitis five, ten or fifteen years later, at which time the mortality risk, as noted, is much higher."

CARCINOMA OF THE OVARY

As a result of their experience in the management of patients with carcinoma of the ovary at St. Alexis Hospital, three Cleveland physicians assert that perhaps by a concerted effort directed at the education of the public and practicing physicians concerning the manifestations of this disease, its epidemiology and its therapy, it may be possible to increase the numbers of early diagnoses and of cures.*

The Cleveland group assert that primary carcinoma of the ovary is an increasing problem, and that next to carcinoma of the cervix it is the commonest malignant disease of the female genital tract. Unfortunately, it presents no early warning signal, and the majority of cases are detected only after the disease is widely disseminated. The therapeutic results do not appear to improve, despite modern approaches to the problem. According to the American Cancer Society, 8,900 women die from cancer of the ovary in the United States each year and in some areas of the country it causes as many or even more deaths than cancer of the uterine cervix. In the judgment of the authors, the gravity of cancer of the ovary and its increasing incidence due to the increase in life expectancy warrant further and continuing evaluation of its diagnosis and treatment.

The study at St. Alexis Hospital encompassed the years 1953-1965, and included 85 cases of primary carcinoma of the ovary. During this same period there were 125 cases of benign tumor of the ovary. The diagnosis was confirmed by pathologic examination in all cases. Follow-up study was possible in all but two of the 85 patients with cancer of the ovary.

The following staging classification, based on the findings at the initial exploratory laparotomy, was utilized in order to evaluate the results of therapy:

Stage 1—cancer limited to one ovary. There were 23 cases in this category, and at the time of the study 17 were living and six had died.

Stage 2—cancer limited to both ovaries. This was found in five patients, of whom three were still living and two had died when the report was written.

Stage 3—cancer involving the pelvic viscera or pelvic perineum. This was the finding in 18 patients, nine of whom were living and nine dead at the time of the study.

Stage 4—cancer extending beyond the confines of the pelvis. This was present in 39 patients at the initial surgical operation. Thirty-six of them had died and three were living at the time of the report.

In the group of 85 patients, the youngest was 24 years of age and the oldest was 78. The majority were between 41 and 69 years of age.

* Solwan, F. A., Naji, A. F., and Boukalik, W. F.: Primary ovarian carcinoma. OHIO M. J., 64:204-208, (Feb.) 1968.

Abdominal pain was the commonest complaint, and it occurred in 57.7 per cent of the patients. The pain was usually mild and crampy and was usually localized to the lower abdomen. In six patients there was acute abdominal pain due to torsion of the tumor pedicle. Abdominal swelling was complained of in 49 per cent of the cases. Postmenopausal bleeding occurred in 15 patients, and this was ascribed to an associated hyperestrinism. The duration of symptoms varied from one week to four years. However in the majority of patients it was from three to five months. A palpable pelvic mass was present in all but one patient. Intravenous excretory pyelograms and barium enemas were helpful in establishing the diagnosis in some cases.

In this group of patients, papillary serous cystadenocarcinoma was the commonest malignant ovarian tumor, occurring in 53 per cent of the patients. Among the benign tumors, 46 per cent were serous cysts. Two patients had previously undergone unilateral oophorectomy for papillary cystadenoma, but were included in this series with papillary serous adenocarcinoma. Also, two patients were originally diagnosed as having serous and mucinous cystadenomas, but on follow-up the tumors had recurred and were found to be malignant.

The authors emphasize that the majority of ovarian tumors are cystic, and at the time of surgical exploration the surgeon is confronted with the problem of deciding whether the tumor is benign or malignant. Tumors with a thick wall, cysts adherent to adjacent structures, hemorrhage within the cyst in the absence of torsion of the pedicle, and friability of papillary growths on either the inner or outer surfaces are strongly suggestive of malignancy.

In the surgical treatment of this group of patients, the procedure depended in large measure upon the stage of the disease. In the majority of patients with advanced disease, only a biopsy was done. Others had unilateral salpingo-oophorectomy, and in some patients a hysterectomy with bilateral salpingo-oophorectomy was performed. Early in the series unilateral excision of the tumor was done in the majority of patients. However a similar neoplasm of the other ovary was found in two patients—in one instance just one week after the initial operation, and in the other three years later. There were four postoperative deaths, or a mortality rate of 4.7 per cent.

Radiation therapy was employed in 12 patients with Stage 1 disease; in 3 patients with Stage 2 disease; in 11 patients with Stage 3 disease; and in 20 patients with Stage 4 disease. Chemotherapy in combination with radiation therapy appeared to be more effective than either one alone in patients with Stage 4 disease.

In the group of 85 patients, 32 were alive and 53 had died. The absolute five-year survival figures are available for only 47 cases, of whom just 13 (27 per cent) have survived five or more years. The combined five-year survival rate for Stages 1 and 2 was 71 per cent; for Stage 3 it was 33 per cent; and for Stage 4 there were no five-year survivors. The survival rates depended not only upon the extent of the disease but upon the histologic type. Anaplastic carcinoma solid adenocarcinoma, dysgerminoma and embryonal carcinoma tended to be the most malignant and had the poorest prognoses.

From their study, the authors found it is the extent of the disease that is the determining factor in the survival of patients with carcinoma of the ovary. In their group of 85 patients, more than two-thirds had advanced disease at the time of initial treatment. Many of the patients had had no medical or pelvic examinations for many years before the diagnosis was established. Despite obvious clinical manifestations, there had been delays in the institution of therapy in nine patients.

In their conclusion the authors said, "We believe that the most effective approach to the disease is early diagnosis and complete surgical therapy: total hysterectomy and bilateral salpingo-oophorectomy. Conservation of the ovary may be permitted in a childless young woman, but it carries with it a great responsibility. That ovary should be bisected and examined carefully. Radiation therapy is more likely to be effective when all gross tumor has been extirpated."

Finally, they emphasized that public and professional education concerning this disease and its therapy could facilitate earlier detection and more cures.

University Hospitals DRUG LETTER

The Unit Dose Drug-Distribution System

H. J. BLACK and W. W. TESTER

During the past four years a new concept of pharmacy service has been under study in the University Hospitals. Under the experimental system referred to as Unit Dose Drug Distribution, the pharmacist receives a facsimile of the physician's medication order as it is written in the patient's chart. He then provides a unit dose of medication to the nurse in ready-to-administer form in response to the chart order. This type of pharmacy service is currently being provided to approximately 150 patients of the Departments of Internal Medicine and Urology by a subpharmacy located near the five wards. The subpharmacy is staffed by a pharmacist 24 hours a day, and is stocked with a supply of unit dose medications in quantities adequate to replace the supply of drugs formerly located at each nursing station.

Mr. Black is director of the Pharmacy Department, University Hospitals and assistant professor in College of Pharmacy. Mr. Tester is director of Pharmaceutical Services and associate professor in the U. of I. College of Pharmacy. The study that they report was supported by U.S.P.H.S. grant No. HM00328. This article first appeared in the March, 1968, issue of DRUG LETTER, a monthly intramural publication of University Hospitals. It is reprinted here at the suggestion of the Clinical Pharmacology Committee and with the permission of the authors.

DEFICIENCIES OF THE CONVENTIONAL MEDICATION CYCLE

Although the conventional medication cycle has provided adequate service for many years, it does have some inherent weaknesses. An examination of the conventional cycle (Figure 1) will help illustrate some of them. As the nurse receives and interprets the physician's medication order, she first transcribes it to the nurses' Kardex and then, to obtain the drug from the pharmacy she must complete a pharmacy requisition and send it to the central pharmacy. During these steps, inefficiencies and opportunities for error occur. Central pharmacy receives the requisition and dispenses "multiple dose" packages of medication to the nurse without a pharmacist's seeing the original order, the patient's complete drug regimen or the dosage schedule for the drug involved. Of the "multiple dose" quantities of medications at the nursing station, only a few are identified for specific patients. The majority are "ward stocked" for general use. Thus the nurse is engaged in ordering, receiving and maintaining inventory control for about 200 different drug products at each nursing station.

Prior to each medication-administration period, the nurse makes a selection from her supply of drugs, and prepares the medications for administration to each patient. Preparation involves activities ranging from counting a few tablets into

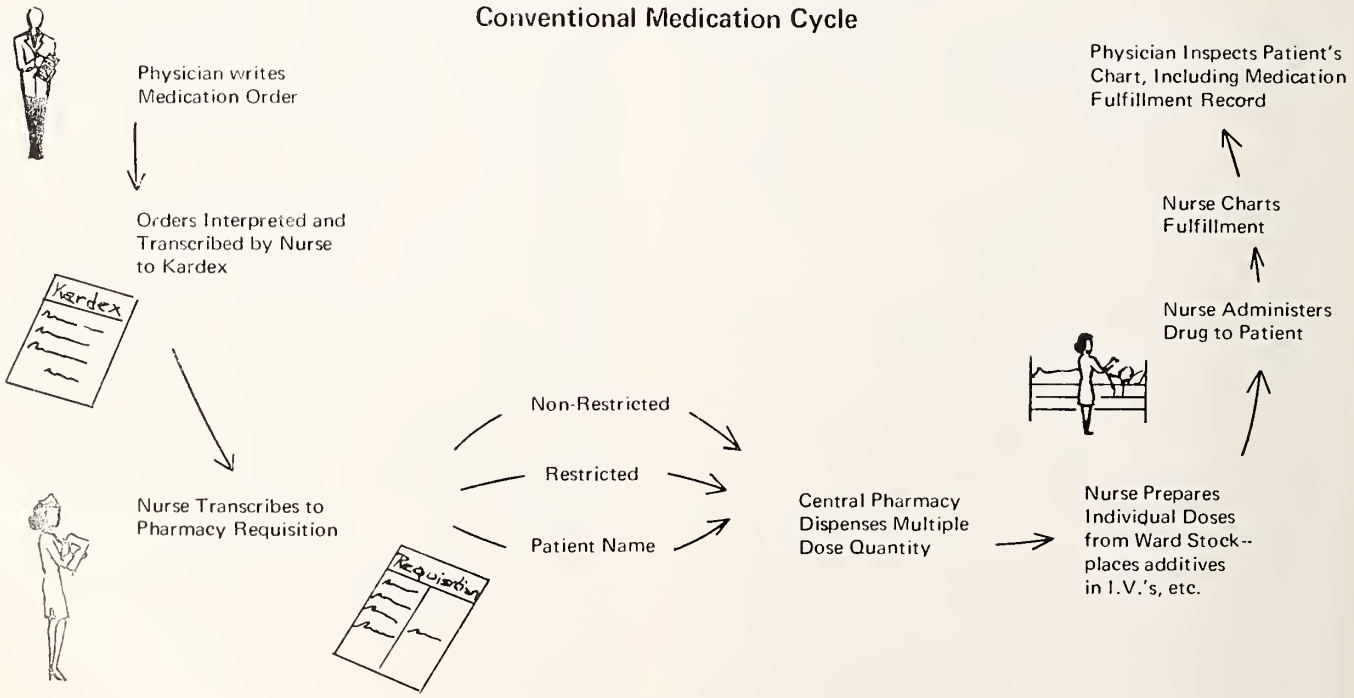


Figure 1

a medicine cup to compounding large-volume intravenous solutions, and in so doing manipulating various additive solutions. As soon as a medication has been "prepared" and drawn into a syringe or poured into a cup, its identity is lost. After that step the medications are placed on a medication cart together with the medications for all other patients receiving doses at or about the same time. After all doses have been administered, the nurse returns to her station and notes the fulfillments on the patients' charts. Because there is no provision for noting fulfillment on the nurses' Kardex at the time of administration, this step may not always be performed as accurately as it should be.

OBJECTIVES OF THE UNIT-DOSE STUDY

The unit-dose study has been designed in an attempt to improve the method of handling drugs. Its specific objectives are:

(1) To provide a copy of the medication order to the pharmacist so that he can maintain a medication Kardex for each patient which will include total drug therapy, drug sensitivities, diagnosis, weight and other pertinent data

(2) To establish unit-dose packaging of medications

(3) To establish a subpharmacy at the floor level

(4) To centralize the drug stock and maintain it in optimal condition by removing most drugs from five or six nursing stations and consolidating it within one area

(5) To provide 24-hour pharmacy service

(6) To provide unit-dose medications to the nurse in a prepared, ready-to-administer, fully identified form, and

(7) To deliver the medication on an administration cart which provides a separate, labeled compartment for each patient's drugs, along with ancillary administration items.

Figure 2, the "Unit-Dose Medication Cycle," illustrates how these objectives are achieved. The physician writes the medication order as usual, and the nurse or her designate sends a copy to the subpharmacy via a photoscanner transmitting device. Emergency orders are transmitted via an intercom. Upon receipt of the order by the pharmacist, it is transcribed to the patient's medication Kardex. The order is filled by the pharmacist with medications in unit-dose ready-to-administer form, and is placed in an individual patient medication box on the drug cart. The cart is delivered to the nurse prior to the next scheduled drug-administration. A copy of the medication Kardex is provided to the nurse so that the pharmacist and the nurse refer to a common document, prepared by pharmacy and verified by nursing. At the designated administration time, the nurse takes the cart to the patient's bedside, checks the labeled dosage form against her Kardex, administers the drug, and charts fulfillment in her Kardex while still at the bedside.

IMPACT OF THE UNIT-DOSE SYSTEM

A pharmacist is on duty 24 hours a day near the patient-care areas served, thus improving and simplifying communication. Because the pharmacist receives a copy of the complete medication

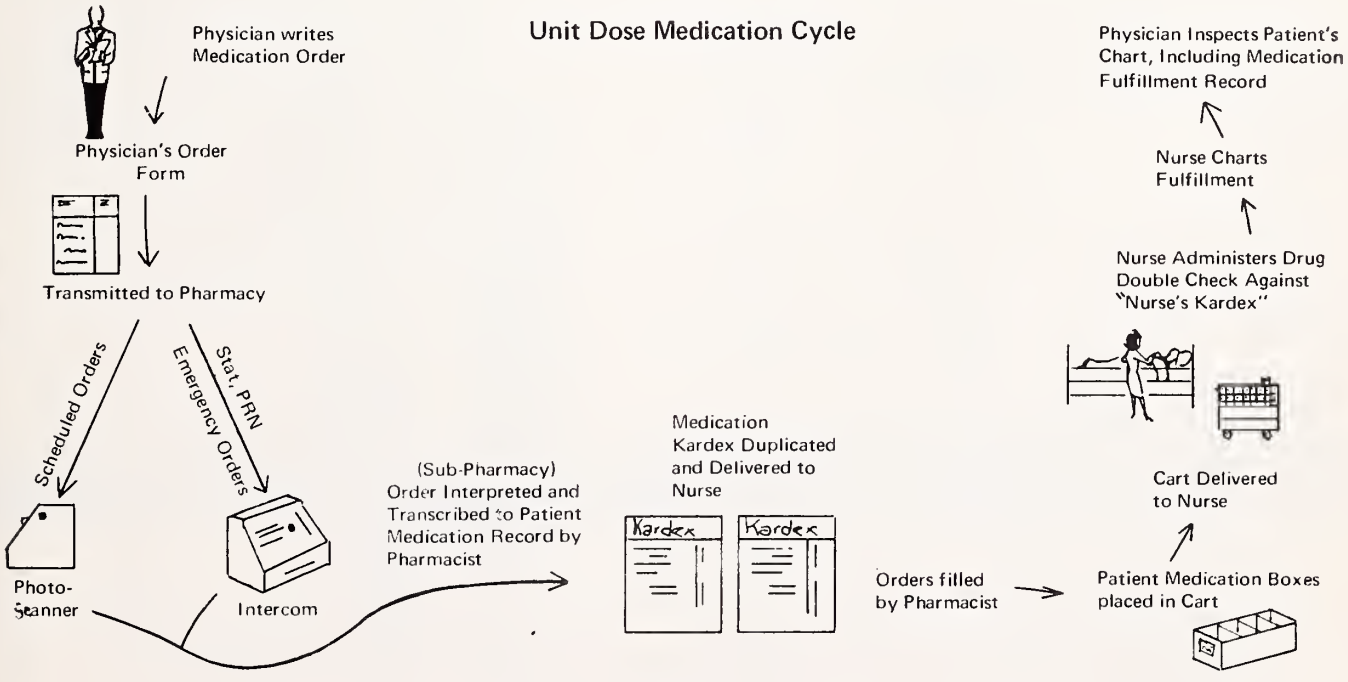


Figure 2

regimen for each patient, he is able to contribute to the total medication cycle in a manner not possible under the traditional system. By assigning responsibility to the pharmacist for interpreting drug orders and preparation of medication Kardexes, it is possible for him to clarify terminology, including relationships between generic names and trade names, metric and apothecary units of measure, etc. The pharmacist prepares each dose for administration in unit-dose form, using a laminar-flow sterile hood for parenteral doses. Each dose is individualized and labeled up to the time of administration to the patient. Therefore a final check at the bedside is obtained. Because of the pharmacist's location and availability, he is better able to provide information on drug dosage, side effects, drug interactions, contraindications, etc., when it is requested by the medical or nursing staff.

The effect of the unit-dose system on the nurse is salutary. She is relieved of pharmaceutical activities, and is free for other duties.

One portion of the study involved a measurement of the accuracy of charting fulfillment. Data collected indicated that under the conventional system drugs were occasionally administered but not charted. That omission affected the accuracy of the chart and of the patient's record, but it also represented a loss in hospital revenue, since drug charges to the patient are made on the basis of administration records. It would seem that substantial improvement in this regard can be realized by providing a method for chart fulfillment at the patient's bedside. It was not possible under the conventional system. This possibility is being evaluated as part of the present study.

The floor space requirements for one subpharmacy in the ward area is approximately equal to the drug-storage space released as drugs are removed from the various nursing stations.

SUMMARY

Unit-dose pharmacy service has been provided by one subpharmacy to 15 per cent of the patients in University Hospitals for several months. The system is designed to transmit a copy of the medication order directly from the physician to the pharmacist. This enables the pharmacist to react to the order and to provide many of the pharmaceutical services which the nurse has been performing under the conventional system. As pharmacy assumes the functions of stock control, Kardex and dosage preparation and certain phases of record-keeping, a good deal of the nurses' time is released. Unit-dose pharmacy service enables the pharmacist to contribute more to the medication cycle, and enables the nurse to spend more of her time in nursing, thus in part relieving the nurse shortage.

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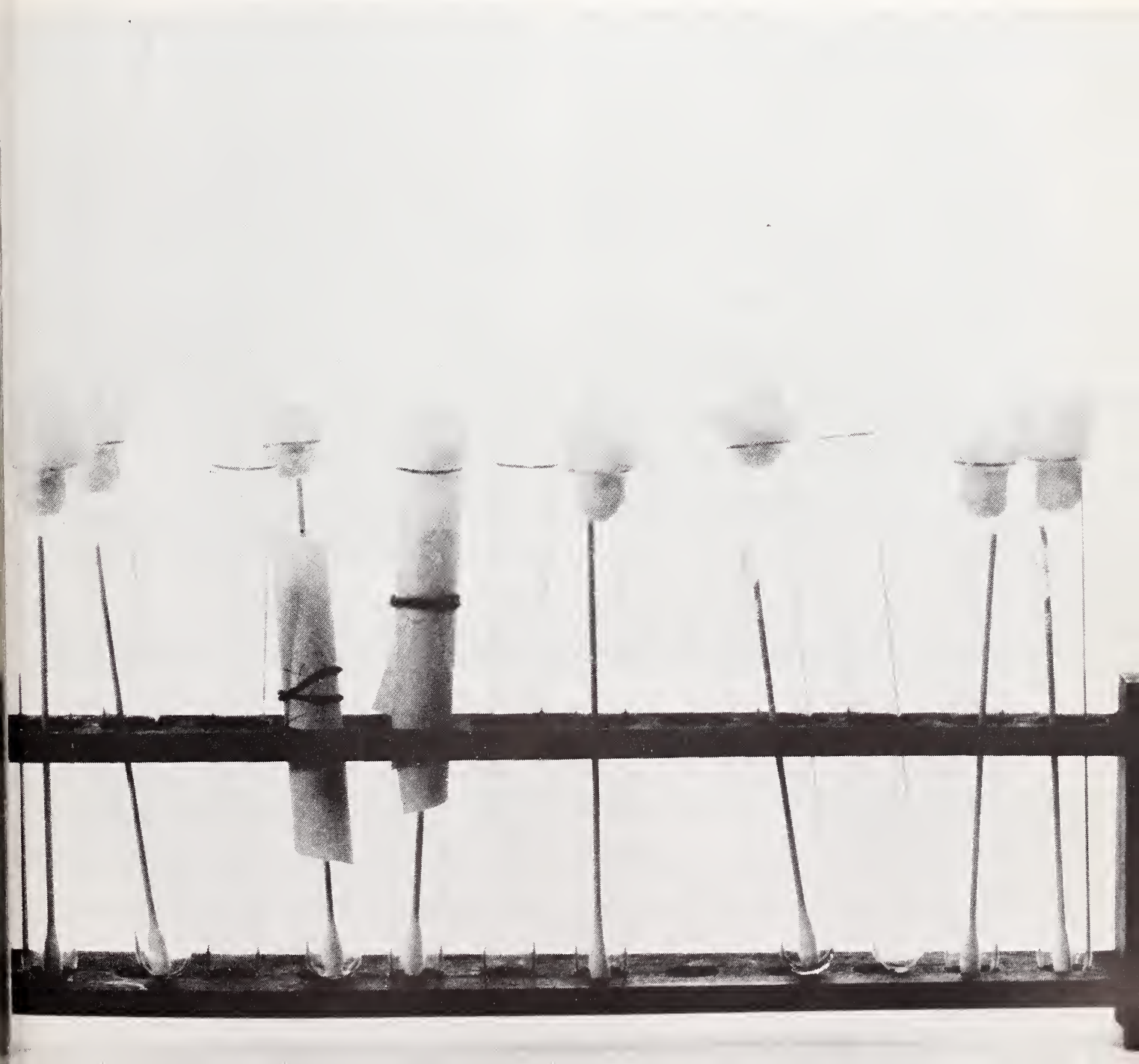
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INFORMATION FROM THE
IOWA HEART ASSOCIATION

Present Status of Permanent Pacing of the Heart

VICTOR PARSONNET, M.D.
Newark, New Jersey

After almost a decade of experience, the safety and effectiveness of implanted permanent pacemakers has become apparent. Although certain attitudes and methods continue to change, most of the principles of the use of pacemakers are well established.

INDICATIONS

At first the only indication for insertion of a permanent pacemaker was complete heart block with Stokes-Adams seizures. Today other arrhythmias (Table 1) are also treated with permanent implants, because a reliable implantable standby (demand) pacemaker has been developed. This has extended the use of pacers to those conditions where competition between the pacemaker and naturally occurring beats is likely to occur.

Patients may survive many years with complete heart block with medical therapy alone, but most of them die suddenly within two to four years, presumably of a Stokes-Adams attack. Moreover, most patients with cronic complete atrioventricular heart block, who were "asymptomatic" before pacing, notice improvement in their sense of well being after pacer implantation, presumably because of enhanced systemic blood flow. Therefore, as a rule, most patients with complete heart block should be paced, whether they have Stokes-Adams or not.

Dr. Parsonnet is director of surgery, at Beth Israel Hospital, Newark, New Jersey, and clinical associate professor of surgery, at the New Jersey College of Medicine and Dentistry.

TABLE 1

INDICATIONS FOR PERMANENT PACEMAKER IMPLANTATION

1. Complete atrioventricular heart block especially with Stokes-Adams episodes
2. Symptomatic bradycardias
 - Atrial fibrillation with high degree atrioventricular block
 - Sinus arrest
 - Digitalis induced bradycardia
 - Intermittent high degree atrioventricular heart block
3. Persistent tachyarrhythmias
4. Left axis deviation and right bundle branch block suggestive of bilateral bundle branch block (possible indication)

METHOD

There are two approaches in implanting a pacemaker: transthoracic (or transdiaphragmatic) and transvenous. In one, the electrodes are sewn directly onto the heart muscle, and in the other they are placed in the heart via a suitable vein. We now use the transvenous method exclusively because the operation can be accomplished under local anesthesia and therefore may be performed even in bad risk and aged patients with but minor complications and morbidity, and less than 1 per cent mortality (Table 2).

The pacer implant is done by a team, consisting of a cardiologist trained in heart catheterization, a surgeon, and an electronics technician. Under local anesthesia an electrode catheter is inserted through either cephalic or external jugular veins, and positioned in the apex of the right ventricle. The threshold for stimulation (excitation threshold) is measured with an external battery-powered pulse generator to confirm the satisfactory position of the electrode. (An excitation threshold above 0.9 to 1.0 milliamperes is unacceptable.) The catheter electrode is fixed in place in the vein and the power pack is implanted in a subcutaneous pocket in the upper chest wall. The patient is ambulatory in a day or two and ready for discharge within a week.

Complications with this method occur in 10 per cent of cases. Included in this figure are component and battery failures. Other complications can be avoided or reduced by proper at-

TABLE 2

MORTALITY FOLLOWING PACEMAKER IMPLANTATION

	Complete Operations	Number of Patients	Number of Operative Deaths
Transthoracic (including transdiaphragmatic)	85	74*	2 (2.5%)
Transvenous	199	174**	2 (1.0%)
Totals	284	248***	4 (1.5%)

* Including one converted from transvenous and four converted from transthoracic to transdiaphragmatic.

** Including 15 converted from transthoracic.

*** 20 patients counted twice.

tention to implantation techniques. For example, broken leads can be prevented by proper handling of the electrodes and by placing the pulse generator in the pectoral position where there is little flexing of the wires. Electrode dislodgement can be prevented by fixing the electrode well into the vein, and by positioning it at the very apex of the right ventricle.

A rise in excitation threshold above the output of the pacemaker (exit block) occurs if scar tissue separates the electrode from the myocardium as a result of poor initial placement, secondary infection, or perforation of the heart. Careful attention to details has almost eliminated these problems.

PRELIMINARY TRANSVENOUS PACING

Although it is tempting to insert a permanent pacemaker as a primary operation, preliminary transvenous pacing is the rule at this institution. A temporary bipolar electrode is inserted through a suitable vein (external jugular, antecubital, femoral or saphenous) into the outflow tract or the apex of the right ventricle. Immediate control of ventricular rate is thereby achieved. Definitive implantation can therefore be done electively, and anesthesia, if needed, can be employed with safety.

PACING MODE

Three modes of pacemakers are available: fixed rate, P-wave synchronous, and standby. The fixed-rate pacer fires at a constant rate which in some models can be altered by external manipulation. The P-wave synchronous pacer rate is determined by the sinus node rate. It is commercially available only for implantation by thoracotomy, not pervenously. The standby or demand pacer fires when the spontaneous rate falls below a preset level. Fixed-rate pacing has the advantage of being well tested by time. It is reliable and likely to last three or more years, and therefore it is still the method of choice in many clinics.

There is evidence, however, that fixed-rate pacing may be dangerous in patients who have "competition" between spontaneous and paced cardiac complexes. Fatal ventricular fibrillation can occur from stimulation of the heart by the pacemaker when the stimulus falls at the apex of the preceding T wave. Although at most times the paced human heart may be relatively insensitive to competition, the fibrillation threshold can be lowered by anoxia, digitalis, or electrolyte imbalance. In such situations, competition can produce repetitive rhythms and ventricular fibrillation.

There now are numerous reports of unexplained sudden deaths in paced patients. Eleven sudden deaths have occurred in our series of 228 patients; ten of these patients were paced with fixed-rate pacemakers in the presence of competition.

The standby pacemaker fixes effective stimuli only when the spontaneous heart rates falls below preset limits. It thus avoids the dangers of competition and is displacing the fixed-rate pacer in many institutions.

FOLLOW UP

Experience with a follow-up clinic has shown that the best way to determine when to change the pacemaker is to analyze the expanded electric impulse (artifact) of the pacemaker. Changes in the pulse rate, and the height, duration, and contour of the artifact, may indicate that pacemaker failure is impending. Seventy-five per cent of changes in our clinic have been elective as a result of such an analysis. The use of a computer facilitates this type of study.

FUTURE

Batteries in existing pacemakers last from two to four years, depending upon the model. The longest life of any pacemaker in our series was 47 months. The electrodes and wire leads, on the other hand, last much longer. Therefore, the most important advance in the future will be an improved power source. This may be in the form of a radioisotope generator now under development. There have also been changes in electrode design that may significantly reduce power requirements and thus increase battery life.

TABLE 3

SELECTION OF MODE OF PACING

Situation	Type of Pacer	Rationale
I. First insertion		
A. Patient in fixed block	Standby	To avoid competition in those patients that revert to regular sinus rhythm (30-50%).
B. Intermittent block	Standby	To avoid competition in all patients.
II. Return to regular sinus rhythm in patients with fixed pacer	Standby	To avoid competition.
III. Elective change of pacemaker in patients with fixed complete block and no evidence of competition	Fixed rate	Return to regular sinus rhythm and competition unlikely after 3 years.

THE DOCTOR'S BUSINESS



Cancel Your Permanent Insurance??

HOWARD D. BAKER
Waterloo

Periodically, firms calling themselves "financial consultants" or "estate planning consultants" start sales campaigns among professional people, proposing that doctors should replace all of their permanent and level-term life insurance with decreasing-term insurance, and invest the premium savings directly in common stocks or buy mutual-fund shares.

That type of financial planning reached a peak in 1960-1961, and then all but disappeared. Recently we have experienced a new wave of it—particularly in the Southern and Western parts of our country.

There are a number of inconsistencies in this approach to insurance-investment planning which one must consider carefully when he evaluates such a proposal. The most significant fallacy in the "decreasing-term approach to financial planning" is the assertion that the premium difference can be reinvested in equities to yield 6, 7 or 8 per cent. To the extent that your permanent insurance provides guaranteed cash values, you are fulfilling part of your need for the "fixed-dollar" commitments that provide balance in your financial plan. If you buy decreasing-term life insurance and use your premium savings to buy stocks or investment funds, you will need to replace the cash values of your whole-life insurance policies with fixed-dollar contracts of some kind. And since the cash values of your insurance policies have earned 3 to 4 per cent *tax-free*, you will need to find investments earning between 5 and 9 per cent before taxes just in order to come out even. And in the area of fixed-dollar contracts, such investments aren't easy to find.

Actually, permanent life insurance consists of decreasing-term insurance plus a method for accumulating tax-sheltered, fixed dollars. A commitment of premium savings to a taxable fixed-dollar medium will rarely, if ever, equal the accumulation of a permanent insurance contract.

A second major fallacy in this type of planning is that it presumes a specific investment accumulation at a stated time, and then supplements that accumulation with insurance. Proper planning establishes an adequate insurance program, and then supplements it with investments, and provides for periodic reviews and revisions of the program.

We feel that a much more logical approach is to make the life-insurance program a "protective" vehicle rather than a "speculative" one. In other words, if all other financial planning techniques falter or fail, there should always be a basic permanent insurance program to fall back upon.

This approach to your insurance programing *preserves your alternatives.* If you have a basic permanent insurance program, and if unusual investment success occurs, your program can always be modified downward. However if you use the "decreasing-term plus investment" approach, by the time it becomes obvious that your plan has failed it will be far too late and to expensive for you to make the necessary upward revisions.

Through a more conservative approach you not only eliminate dependence upon investment success, but also eliminate speculation on your age and insurability. We have found that there is much less likelihood that a man will disturb his insurance program to finance travel and the purchase of an expensive home and other luxuries, than there is of his turning to his investment accumulations to pay for these things. In other words, if a decreasing-term and investment program is successful for 20 years, and then your investments are invaded and significantly depleted, your total program will be inadequate. It is much less likely that you will invade the guaranteed values of your basic insurance program for such luxuries at age 55 or 60.

If and when you are approached by someone

(Continued on page 1182)

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at U. of I.,, and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

THE JOURNAL *Book Shelf*



Book Reviews

THE SIDE OF THE ANGELS, by *John Rowan Wilson* (Garden City, New York, Doubleday and Company, 1968. $5.95).

This review is somewhat flawed by the fact that the reviewer is a literary "square" who believes that a novel should not so much convey a message as tell a story—the better the story, the better the novel. THE SIDE OF THE ANGELS was written by an Englishman who is a doctor, a fallen-away doctor so to speak. The story is that of Peter Karas, a relatively young Hungarian who works as a research biologist in a Soviet scientific center. He is not a captive scientist, but is in Russia by choice. He purposefully leads a somewhat humdrum existence of non-involvement, dividing his time between doing research in the laboratory, bedding down with some of the girls at the university (humdrum?), and playing a weekly game of chess with his friend Max. However Max, a fragile but brilliant molecular biologist, commits suicide, leaving his secret research notes with Peter, to be used only for the benefit of humanity. The secret discovery, never revealed even to the reader, is by inference the secret of life, the discovery of the method of genesis of primitive living organisms from inanimate material.

Peter, encouraged and aided by Max's widow (who turns out to be a rather warm number), defects to the United States with the help and guidance of a powerful pharmaceutical and industrial giant. The stage is thereby set for what could have been a wonderful story—a great adventure of intrigue, spies, science fiction, romance, evil, virtue, international power, great affairs of state. But what actually follows is a rather uninteresting story of the conflicts that develop between the run-away Soviet scientist and the selfish public-relations attitudes of his American benefactors. We end up with a mediocre story and a warped message—that there is no more freedom in the United States than in Russia. One wonders if the author, in his medical days, could tell the difference between chickenpox and smallpox.—*Daniel F. Crowley,* M.D.

HEREDITY, DISEASE & MAN: GENETICS AND MEDICINE, by *Alan E. H. Emery,* M.D. (Berkeley and Los Angeles, University of California Press. $6.95).

This little book of just under 250 pages is really a primer of modern genetics, written not for the geneticist, but for students in other scientific fields and for medical and paramedical personnel who are interested in the subject and its application and importance in clinical medicine. The physician will find it not only exceedingly pleasant reading but a reliable source of information concerning recent contributions to the subject of genetics. The intelligent layman who has a curiosity about the subject will find the little volume stimulating and informative.

The first chapter is entitled, The Development of Genetics, and relates in more or less chronological order the successive contributions to the knowledge of the subject—a fascinating story extremely well told. In all there are ten chapters which present in some detail the chemical basis of inheritance, chromosomes and their abnormalities, developmental genetics, inheritance in families, genetics in certain diseases, etc. A glossary of genetic terminology, lists of suggested reading appended to the chapters and a general bibliography are valuable additions.

For the physician who has not had the benefit of a recent course in genetics or for the layman who is interested in the subject, this volume is highly recommended. As a matter of fact when he is engrossed in reading it the interruption of the telephone will be very much resented.—*Dennis H. Kelly, Sr.,* M.D.

THE CARE OF THE RHEUMATOID HAND, SECOND EDITION, by *Adrian E. Flatt,* M.D. (Saint Louis, The C. V. Mosby Company. $14.00).

The author uses a quotation from John Hunter as the keynote to this book: "Never ask me what I have said, or what I have written. But if you ask me what my present opinions are . . . I will tell you." Thus he indicates that the treatment of rheumatoid arthritis is still in a state of flux. The forthright statement that medical prevention and control of the disease will be the ultimate solution places the whole subject in proper perspective.

The first edition of this book was published in 1963. That there is intense interest in this disease and in its solution is attested by the number of papers published on this subject, references to which are given.

The author has been in intimate touch with the surgeons who are doing pioneer work in this new field —surgery of the rheumatoid hand—notably in Britain, Finland and Switzerland. He himself has made significant contributions.

The smooth-flowing literary style of writing is noteworthy, and should serve as a model for others. Photographs and illustrative drawings are also of the highest quality, adding greatly to the readability of this book.

The surgical treatment of this disease will have an important place until some biochemical mode of control is found. The indications for and scope of surgery as regards the hand are accurately described by Dr. Flatt.—*Julian M. Bruner,* M.D.

RETAINING LIGAMENTS OF THE DIGITS OF THE HAND: GROSS AND MICROSCOPIC ANATOMIC STUDY, by *Lee W. Milford, Jr.*, M.D. (Philadelphia, W. B. Saunders Company, 1968. $13.00).

The key to an understanding of many of the digital deformities which beset the human hand is a knowledge of the anatomy of the extensor tendon mechanism, and of the joint and skin ligaments related to it.

Although anatomical dissections of the fingers have been done for several centuries, those structures were not well known until recently. The reasons for this lack of progress lay in the difficulties of micro-dissection and of interpretation, confusion of terminology and variations in individual anatomy.

This book represents a positive step towards the clarification of this whole field. Dr. Lee Milford, orthopedic surgeon, of Memphis, Tennessee, has undertaken the meticulous dissection of ten fresh frozen adult amputated hands, and these dissections have been recorded in a series of enlarged color photographs of superb quality.

The structures so graphically demonstrated include the retinacular ligaments (oblique and transverse) of Landsmeer, the sagittal band, and the skin ligaments of Cleland and Grayson. Not until we comprehend the complex anatomy of these structures and their function, can we hope successfully correct crippling deformities of the fingers due to stiffness of the joints in flexion or extension.

Dr. Milford's book opens up a new range of possibilities in treating these deformities, hitherto considered hopeless. It is essential reading for all surgeons who have the temerity to operate upon stiff fingers.—*J. M. Bruner,* M.D.

EMERGENCY SURGERY OF THE HAND, by *Professor Erik Moberg* (Edinburgh & London, E. & S. Livingstone, Ltd., 1967. $4.00).

The author of this small book, Erik Moberg, is professor of surgery at the University of Goteborg, in Sweden. His work at the Sahlgrenska Hospital is concerned with the surgery of the extremities, including surgery of the hand, of which he is the outstanding authority in the Scandinavian countries.

Professor Moberg was one of the small group of European surgeons who came under the influence of Dr. Sterling Bunnell after World War II. Inspired by Dr. Bunnell with the importance of surgery of the hand, he has been one of the outstanding leaders in this specialty which has progressed so rapidly in the past two decades.

Dr. Moberg played a pioneer part in the use of xylocaine for brachial and axillary block in surgery of the hand. His writings on the shoulder-hand syndrome, especially in regard to prevention, have done much to bring this important subject to the attention of the profession. He has contributed many original ideas to the treatment of fractures of the upper extremity. Possibly his most important contributions have been to stress the importance of sensation in restoring useful function to the hand, and to develop the nin-hydrin test. These subjects are all alluded to, but in this book he does not undertake to cover the entire subject of surgery of the hand.

Professor Moberg is, above all, an outstanding teacher and this book is a synopsis of his teachings. Analogy may be made between the placer gold miner, and this author, who has panned the sands of his experience in surgery of the hand. The surgeon who treats hands will do well to examine the nuggets contained in this book.—*J. M. Bruner,* M.D.

BOOKS RECEIVED

SPARE-PART SURGERY by *Donald Longmore,* F.R.C.S. (Garden City, New York, Doubleday & Company, Inc., 1968, $5.95).

SELECTED PAPERS ON DIRECT PSYCHOANALYSIS, VOL. II, by *John N. Rosen,* M.D. (New York, Grune & Stratton, 1968, $6.50).

A DOCTOR'S APPROACH TO SENSIBLE DIETING AND WEIGHT CONTROL by *Paul G. Neimark* in consultation with *Eugene Scheimann,* M.D. (Chicago, Budlong Press Company, 1968, $1.75).

A DOCTOR DISCUSSES NARCOTICS AND DRUG ADDICTION by *Louis Relin* in consultation with *Robert L. Sharoff,* M.D. (Chicago, Budlong Press Company, 1968, $1.75).

SYNOPSIS OF SURGERY by *Richard D. Liechty,* M.D., and *Robert T. Soper,* M.D. (St. Louis, C. V. Mosby Company, 1968, $12.50).

ATLAS OF PRECAUTIONARY MEASURES IN GENERAL SURGERY by *Ivan D. Baronofsky,* M.D., Ph.D. (St. Louis, C. V. Mosby Company, 1968, $23.50).

Cancel Your Permanent Insurance?

(Continued from page 1180)

offering a scheme like this, consider it very carefully. Consider the fallacies that I have reviewed. Consider that it is basically unethical and/or illegal for an insurance man to recommend cancellation of one life insurance contract in favor of another. Consider the fact that the proponent of the plan very probably sells both insurance and investments, collecting commissions on both and lacking objectivity for evaluating these different types of financial planning.

It is our basic philosophy that a life insurance program should provide protection and should eliminate the unknown gamble as much as possible. We believe that any insurance program which omits a basic nucleus of permanent life insurance and employs the premise that you will accumulate investments at the same rate that your insurance decreases is sheer speculation!

Finally, we believe that revisions in a life insurance program should be made on the basis of *progress actually made in the past*—not on the basis of *accomplishments projected or hoped for* in the future. When you gamble with your life insurance program, you are gambling with the future financial welfare of your wife and children. If you are willing to do that, you probably don't need life insurance at all.

If you become seriously interested in a proposal such as I have been discussing, the very least you should do, before making a decision, is to review the proposal carefully with your attorney, your trust officer or your management consultant —or preferably, with all three!

STATE DEPARTMENT OF HEALTH



JAMES F. SPEERS, M.D., M.P.H., COMMISSIONER

Diets and Diabetes

Although advances in the study of diabetes mellitus are continuing, many problems remain unresolved. Some of the theories more or less accepted as recently as a year ago are being questioned in the light of newer knowledge. Research in the field of diabetes is multifaceted and frequently opens up old areas for reevaluation, and new ones for investigation.

—Thomas P. Sharkey, M.D., F.A.C.P.

It is likely that Iowa's first summer camp for diabetic children, in August of this year, and its classes of instruction for the diabetic and his family which have been conducted at various places for varying lengths of time have called the attention of both physicians and laymen to the fact that diabetes mellitus is becoming increasingly important among the major health problems in the United States. It is now the eighth leading cause of death. It is a chronic disease which cannot be cured, but it can be controlled by well-informed and cooperative patients.

Throughout the past two years, classes for diabetics and their families have been held in Des Moines. A committee of physicians, dietitians, nurses and pharmacists has planned and sponsored them. Classes have also been conducted in the hospitals at Belmond, Newton and Charles City. They were initiated by the dietitians there, with full cooperation from the physicians, hospital administrators and nurses. Lectures were presented by a dietitian, a physician, a nurse and, in some instances, a pharmacist.

Diets have long been recognized as a part of the essential program for diabetics. Dr. Alexander Marble, of Boston's famed Joslin Clinic, emphasizes that satisfactory diabetes control depends on maintaining normal-range blood-glucose levels by means of a diet designed to help the patient sustain his proper weight, strength, growth and degree of physical activity.

It has been recommended that in all but the most severe forms of the disease the decision to use insulin should be made only after either a diet suited to the patient's caloric requirements, or a diet plus hypoglycemic agents, has proved insufficient as a means of controlling the patient's glucose level.

Despite the significance of diet, data from the National Health Survey conducted in 1964 and 1965 indicated that nearly one quarter of the Americans with diabetes had not been given diets for their diabetes. Those data also indicated that another quarter of the diabetics had been prescribed diets but were not following them.

During the National Health Survey, all persons who were in the sample and who had been identified as diabetics were asked to answer the Diabetes Supplement Questionnaire. The reported results were based on the replies of the estimated 82 per cent of those people who completed that Supplement. It was surprising to discover that the majority were unable to give correct responses to very elementary food-substitution questions. Only 9 per cent of the diabetics had attended classes to learn about their disease, and only 19 per cent had received copies of the pamphlet "Meal Planning With Exchange Lists." (A food-exchange list arranges foods in groups according to their nutritional values, thus facilitating substitutions within each group.)

The survey showed that the great majority of diabetics had been given diets, but a large proportion of those who had not received diets appeared to have the milder adult-onset form of diabetes, and most experts agree that diet is an essential part of treatment for overweight adult-onset patients, particularly.

The major problem seemed to be that the patient did not possess a basic knowledge of dietary principles and/or lacked sufficient motivation to follow a diet. Of the 1,800 respondents interviewed, 77 per cent reported having received diets, but only three-fourths of that number said they had been taught how to use one. Fifty-three per cent of the total sample followed their diets, and for 42 per cent the diet was based on the food-exchange lists. But only 20 per cent knew how many bread exchanges are allowed each day. Thus it seemed that people who are directed to follow a prescribed diet should receive practical, individual instruction in its use.

Long-term diet planning for patients with diabetes is usually based on some form of food grouping or "exchanges." Six food-exchange lists were developed jointly by the American Dietetic Association, the American Diabetes Association and the U.S.P.H.S. Some diabetes experts feel that a diet based on the food exchanges is as effective in the management of these patients as is a weighed diet. It is important to remember that other factors influential in the balance of diabetics, such as exercise, stress, emotions, concurrent illness, etc., are inconsistent from day to day. The exchange diet is designed to give most patients a close approximation of their daily needs, but it is not too restrictive.

A tremendous amount of medical responsibility is thrown upon the diabetic patient. He must do his own urine testing, inject his insulin, regulate his activities, choose his diet wisely and even alter his insulin dosage on occasion. Thus he must be thoroughly instructed in the basic fundamentals of his condition, and it is the responsibility of the medical profession to see that he is educated properly and is capable of carrying out his responsibilities.

Recent tests have indicated that the knowledge of diabetes and its treatment is woefully low. This means that a team composed of nurses, dietitians and physicians can best instruct the patient and his family on proper care. In that team approach the physician must direct the effort and assume responsibility for overall medical management. The nurse individualizes many aspects of hygiene and instructs the patient in insulin injection, urine testing and associated procedures. The role of the dietitian is the main one, however, since of all the many activities in which these patients engage, eating is of prime importance. Dietary management influences the patient's entire living pattern, and it must be rational.

The day has long passed when a physician could hand his patient an exchange diet calling for a certain number of calories per day and could merely say, "Follow this." The dietitian is an invaluable member of the team. The knowledge and skills she can transmit to the patient are tremendous. Indeed the Diabetes Supplement of the National Health Survey indicated that dietitians were better dietary counselors than were physicians, for a greater number of patients who had been taught by dietitians were judged to have a "good knowledge" of their disease. Thus dietitians are to be consulted, communicated with and challenged by the medical profession. Through this approach, adequate controls and management can be achieved for patients.

For further information on the conduct of classes for diabetics in your area, write to Elizabeth Procter, M.D., director, or to Mrs. Anna Katherine Jernigan, dietary consultant, Chronic Illness and Aging Service, Iowa State Department of Health, Robert Lucas State Office Building, Des Moines 50319.

Morbidity Report for Month of September, 1968

Diseases	Sept. 1968	Aug. 1968	Sept. 1967	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	327	150	337	For the State
Typhoid fever	1	0	1	Buchanan
Smallpox	0	0	0	
Measles	1	2	10	Dubuque
Whooping Cough	3	3	20	Des Moines, Polk
Brucellosis	7	1	0	For the State
Chickenpox	63	23	28	For the State
Meningococcal meningitis	1	0	2	Johnson
Mumps	165	62	174	For the State
Poliomyelitis	2	0	0	Black Hawk, Des Moines
Infectious Hepatitis	31	17	28	For the State
Rabies in animals	10	11	14	For the State
Malaria	1	0	3	Scott
Psittacosis	0	0	1	
Q fever	0	0	0	
Tuberculosis	7	11	13	For the State
Syphilis	73	59	90	For the State
Gonorrhea	306	421	305	For the State
Histoplasmosis	6	1	0	For the State
Food intoxication	0	0	0	
Meningitis (type unspec.)	4	1	0	Davis, Dubuque, Webster
Diphtheria carrier	0	0	0	
Aseptic meningitis	3	0	2	O'Brien, Webster
Salmonellosis	10	3	15	For the State
Tetanus	2	0	0	Clayton, Floyd
Chancroid	0	0	1	
Encephalitis (type unspec.)	2	0	0	Webster
H. Influenzal meningitis	0	0	0	
Amebiasis	0	0	0	
Shigellosis	3	5	6	Linn, Polk
Influenza	0	0	0	

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the JOURNAL, 1001 Grand Avenue, West Des Moines, Iowa 50265.

Woman's Auxiliary News

Rostrum Ramblings

Now it's November, and not long ago we were wondering where the summer had gone. The Fall Round-Up has come and gone, and was a resounding success. (This is a hopeful statement since these words are, perforce, written well in advance of the event, but I have great confidence in the Auxiliary.) I hope your fall season is in full swing and gathering momentum for our winter activities of service and education.

The Workshop in Chicago last month was most rewarding. Shirley Temple Black, bandaged hand and all, was there and told us of her difficulties in leaving Czechoslovakia after the invasion. Among the other highlights, were films about marijuana and tips for baby-sitters. Both should be useful for showings to church and school groups if you can use them.

Have a Happy Thanksgiving. We all have so much to be grateful for.

—Lenor Bishop (Mrs. James F.)

GEMS

At a recent conference of presidents and presidents-elect in Chicago, "To a Baby-Sitter," a new film, from the GEMS (Good Emergency Mother Substitutes) program was shown. The movie indicates the information a baby-sitter should have before accepting employment, and the information the employer must have before employing a baby-sitter. Emergency procedures are explained. If your community is in need of a training program for baby-sitters, this film would be an excellent one for you to show at one of your meetings. The program was organized to prevent needless deaths and accidents to small children while their mothers are away. Top awards have been given to state and local Auxiliaries by the National Safety Council for this worthwhile safety program. This film is outstanding and would be of great help to you in organizing such a program in your community.

Materials and suggestions regarding GEMS programs may be obtained from your Safety Chairman, Mrs. H. A. Weis, Steepmeadow Club, Box 278, Rock Island, Illinois 61201, or your State Auxiliary office, 1001 Grand Avenue, West Des Moines, Iowa 50265.

25th Annual Conference

Chicago

The 25th annual conference of state presidents, presidents-elect, national officers, and chairmen of the Woman's Auxiliary to the American Medical Association, Inc. was held in Chicago, September 29 through October 2.

The conference opened Sunday evening with four regional dinners chaired by the national first vice-president. Mrs. Howard Ellis, Des Moines, the North Central Region vice-president, presided over that region's meeting, the one which was attended by the Iowa representatives. A "how-to" and "how-not-to" discussion produced many ideas for a membership program, with each president and president-elect participating in the discussion.

Mrs. John M. Chenault, the national president-elect, was the conference presiding officer at its official opening session on Monday morning. Ernest B. Howard, M.D., acting executive vice president, American Medical Association, delivered the keynote address. He reviewed some of the major problems facing medicine as well as business today.

Joseph B. Trainer, M.D., an associate professor of physiology and medicine at the University of Oregon Medical School, discussed "Some Special Characteristics of the Physician's Family." He offered the following suggestion for the doctor's wife, "Give your first priority to the cultivation of your own personal relationship, recognizing that with the first priority will go only a minuscule amount of true time. You came together because some things in your mutual personalities were individually attractive. Try to keep them. Both males and females bring into the relation some common human characteristics, and each needs to fill this for the other. Each must, if they are to be truly successful, meet the need of the other for attention, approval, and love and affection. Each must be the guardian of the dignity and the privacy of the other. Each must secure to the other the avoidance of loneliness."

Mrs. Willard Scrivner presented color slides showing home health aides helping others and serving those in need. She emphasized that this program is simply "people caring for people."

Herbert A. Raskin, M.D., a clinical associate professor in the Department of Psychiatry at Wayne State University, Detroit, Michigan, dis-

cussed "The Use and Abuse of Alcohol and Drugs by Today's Youth." He emphasized that there is no such thing as a safe drug, and explained the proper use and abuse of drugs. Education of the general public—and particularly junior high, senior high and college students—on what can be expected from both alcohol and drugs is essential. In introducing Dr. Raskin, Mrs. Hamilton Ford, national chairman, Mental Health, announced that two new package programs are now available—one on alcohol and one on narcotics.

Dwight L. Wilbur, M.D., president of the AMA, was the guest speaker at the Monday luncheon. He discussed "Medical Manpower—Where Do You Go From Here?" He reminded the Auxiliary of its influential position in guiding young people into health careers, and emphasized that programs in health careers must "escalate vertically."

The president and the president-elect of WASAMA were introduced at the opening of the afternoon session. They briefly discussed the WASAMA project for wives of foreign medical students in our country, and sustaining membership in Woman's Auxiliary to the Student American Medical Association.

William B. Walsh, M.D., president and medical director of Project HOPE, discussed "The Ingredients of HOPE." One of the important aspects of this project is that it is probably the best ambassador of good will this country has ever had. In mentioning some of the problems he urged the AMA and its Auxiliary to find some mechanism for recruiting prospective paramedical personnel from among people who have had little or no education.

George W. Beadle, Ph.D., director of the AMA Institute for Biomedical Research, discussed "New Knowledge and the Practice of Medicine." He touched on the basics of genetics and molecular structures. In his discussion of the Institute, he said that while the Auxiliary is proud of it as it now exists, he hoped that they would be even prouder in the future.

The Monday session ended with a dinner sponsored by AMPAC. Guest speaker Shirley Temple Black stressed our country's need for strong, new leadership, new idealism, and new intelligence. She encouraged the women to become more involved and to listen to what the candidates have to say. "We want our country to be most alert in keeping our strength in Europe," Mrs. Black said. She also feels it is important to "preserve peace in the world" and to sustain the NATO structure. Her recent experience in Prague, when the Russians entered that city, emphasized greatly the importance of democracy.

The Tuesday meeting began with the AMA Seminar on Public Speaking, conducted by Roy Wood, Ph.D., associate dean of the School of Speech at Northwestern University, and three from the AMA speakers' program, the officers service department, and the Radio, TV and motion picture department.

Twelve Auxiliary volunteers, including Mrs. J. F. Bishop, from Iowa, participated in the seminar, and the remainder of those attending the conference were observers. A panel discussion on the art of public speaking was followed by a manuscript-reading drill. After Dr. Wood had given a short lecture on the steps to be followed in organizing a speech, the 12 volunteers rehearsed their live speeches and received critiques in a "private classroom." Following rehearsal of the speeches, the volunteers returned to the conference room and delivered the rehearsed speech, which was videotaped and later critiqued by the instructors.

The Tuesday luncheon program was a production of "Doctor Claudius Hagenbeck's Exporium and Extravaganza for AMA-ERF." Mrs. Chester Young, the national AMA-ERF chairman, was the producer of the show, and she had a very able and imaginative cast.

The afternoon program opened with Mrs. Herbert L. Mantz, parliamentarian, giving tips on "So You Are Going to Have a Meeting." "Lethargy—Never!" was the topic discussed by the chairman of the National Committee on Legislation.

Mrs. D. Ann Sparmacher, an R.N. and secretary of the AMA Committee on Nursing, discussed Health Careers-Horizons Unlimited, pointing out the many facets of the health careers field and urging continued ecorts in the recruitment of personnel.

Mrs. Sue Boe, consumer-information specialist for the Pharmaceutical Manufacturers Association, spoke on "Truth or Consequences," which was of much interest. She said the PMA is not opposed *per se* to the marketing of drugs by their generic names, but opposes any system that would compel physicians to prescribe generically or which would allow anyone to substitute the product of a different manufacturer for the one specified by the physician—for the scientific reason that the products of two manufacturers may produce significantly different results in patients, even though both contain the same active ingredients.

The Wednesday morning session began with a tour of AMA headquarters. Rev. Dr. Paul B. McCleave, director of the AMA Department of Medicine and Religion, discussed the Department's new

AMA-ERF Fund Raising Projects

Note Paper
Playing Cards

Mrs. R. L. Wicks, Chairman
204 South Story Street, Boone 50036
or
Woman's Auxiliary Office
1001 Grand Avenue, West Des Moines 50265

film, "A Storm, A Strife," which was not quite ready for release.

The film "To a Baby-Sitter," from the GEMS program, and the color film "Marihuana" were shown.

The conference closed with remarks by the Rural Health liaison.

Joint Meeting of Woman's Auxiliary and Polk County Medical Society

The 1968-69 year for the Woman's Auxiliary to the Polk County Medical Society got off to a lively start on September 18, with a joint meeting of the physicians and their wives at the Des Moines Golf & Country Club. The delicious prime-rib dinner was preceded by a friendly and enjoyable social hour attended by approximately 200.

In the absence of the Society's president, Dr. William J. Morrissey, the meeting was conducted by the president-elect, Dr. Wallace Rindskopf, assisted by the Auxiliary's president, Mrs. Ralph A. Dorner. Special guests, new members, residents and interns were introduced and welcomed to the Society. Following the dinner, Mrs. Ralph Dorner extended a warm welcome and greetings in behalf of the Woman's Auxiliary.

Announcement was made of another joint meeting combined with Mercy Hospital Day dinner on Oct. 16, at which time the doctors and their wives went to be entertained by the Singing Doctors, from Springfield, Missouri. Emphasis was placed on the value of United Community Services, and of the United Fund campaign which was then in progress. Dr. Austin Schill was chairman of the Polk County Doctors' Team, and everyone was urged to give as generously as possible.

A very interesting talk was given by Mrs. Henry Harmon, of the Des Moines Junior League, an organization which is striving diligently to make the new Des Moines Center of Science and Industry develop from a dream to a reality. The Center will be available to 62,000 Des Moines students, as well as to the students at 13 colleges within a 100-mile radius, and will welcome any other visitors.

The delightful evening was climaxed by spectacular entertainment from the Debonair Deceiver, Jack Pyle, who was presented by Paul Zarnow.

We extend our sincere thanks to Mr. Ed Kingery, of PCMS, Mrs. Robert J. Foley, our Social chairman, Mrs. Edward R. Posner, Jr., our Mailing chairman, and the other Committee members who made that wonderful "kick-off dinner" possible.

North Central Regional Workshop

The state officers and committee chairmen invited to attend the North Central Regional Workshop in St. Louis received much information which they will be bringing to you from time to time to assist you in carrying out your duties. Those attending were Mrs. D. W. Coughlan, president-elect; Mrs. R. L. Wicks, AMA-ERF; Mrs. C. O. Adams, Health Careers; Mrs. M. D. Hayden, Mental Health; Mrs. H. A. Weis, Disaster Preparedness and Safety. The state president, Mrs. J. F. Bishop, attended the Community Health section.

Mrs. Howard Ellis, the North Central Region vice-president, conducted the workshop and Mrs. M. E. Olsen, the North Central Health Careers chairman participated in the program.

International Health Activities

Have you participated in any of the International Health Activities through your medical Auxiliary, local or state? The needs are really quite simple, and without a doubt would give you the satisfied feeling of helping with the health needs of less fortunate people.

There are several areas needing your assistance. To name a few, there are the Thomas A. Dooley Foundation, Inc., which serves the needs of Nepal and Laos, and supplies overseas teams; Project Concern, Inc., which serves Mexico and Appalachia, Hong Kong and South Vietnam; Direct Relief and the Catholic Medical Mission Board, which want medical instruments and equipment, rolled bandages (out of sheeting), gauze compresses, hospital gowns, sample medicines and soap.

Everyone can help with these programs, for everything from needles and thread and toys to woolen scarves and sweaters are needed.

Write your International Health Chairman, Mrs. A. C. Richmond, 1132 Avenue A, Fort Madison 52627, or to your State Medical Auxiliary office, 1001 Grand Avenue, West Des Moines, Iowa 50265, for lists of things needed. Do not send materials until you have received the lists and directions for shipment to the area in which you have a particular interest.

This is an opportunity for you who have useful "white elephants" to help those who can't possibly know what a "white elephant" is. Please do share!

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

President—Mrs. J. F. Bishop, 212 Hillcrest Avenue, Davenport 52803

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Iowa Association of Medical Assistants

Emotions Move Us Toward Self-Expression

In the medical office today, we encounter emotional outbursts more frequently than anywhere else, and we medical assistants must train ourselves to recognize them and respond to them effectively.

There are no rules to guide an observer in making a prediction as to how a person whom he does not know will react emotionally, but this does not mean that emotional reactions occur at random. There is an ultimate orderliness in the occurrence of emotions, but any rule regarding them must be based on both external and internal factors, and since one seldom has access to the internal ones, he is generally unable to predict how a stranger will react.

KNOW YOURSELF

You need only gaze for a minute at your own inner world of fantasy to realize that continuous and varied activity goes on there. In connection with these fantasies there is a constant play of emotions which often bear little relationship to the events around you. Think of the daydreams in which you triumphed heroically, revenged yourself on someone you felt had *hurt* you, or were mistreated by someone whom you *fear*. How much of this fantasy really comes true?

How often have you found yourself overly anxious about some trifle when you knew that your degree of tension wasn't warranted? Yet you couldn't shake it. Can you remember an instance of excessive anger over a trifle, or an instance in which elation swept through you for no real reason? Worry and anger cannot be caused by a trifle. Emotions are always proportional to their real causes. The trifle is only an *excuse* for being anxious. There must be some supplemental event occurring in your inner world.

THREE SUGGESTIONS

Be careful how you deal with other people's emotions, now that you are becoming more fully aware of your own. What should you do? Here are three suggestions:

Encourage expression. In a heightened state of tension, a person will be too distracted to think about what you are saying. In fact, he isn't likely even to listen. No matter how sensible an answer you have for him, hold it back. Concentrate instead on getting him to talk!

Make the other person aware of his feelings. Getting the other person to express his emotions, as I mentioned earlier, is the primary way of dealing with him or her. But sometimes the task is difficult because he lacks awareness of what he is really feeling. This, combined with an unconscious desire to conceal emotions both from himself and from others, works against his expressing himself. It makes him secretive, or it may make him merely sullen and uncooperative. Suggest that his actions seem to indicate that he has this feeling, that his having this feeling is quite understandable and acceptable, and that you just would like to know more about the matter so that perhaps you can help. In short, you want him to talk about what he is feeling. When he does, he may gradually rid himself of tensions and feel better.

Accept emotions without criticizing them. When a person expresses emotion, and particularly if he expresses it strongly, he often becomes anxious. He is afraid that the emotions will get out of hand and that he will lose control of himself.

The important thing to keep in mind about anger is that it is a completely natural reaction. When one wants something badly and can't have it, or when one is hurt in some way, he gets angry. The way to make a person comfortable whenever he expresses intense emotion is to accept it without judgment or condemnation. Never point out that he ought not to feel as he does. The fact is that he feels, and can't control the way he feels. Tell him you understand. In saying so, you do not mean you agree with him. Really what you are trying to do is assure him that his emotional reaction is nothing for him to worry about—that you want to help.

Get into the habit of searching your feelings. Admit them to yourself as much as possible, and accept them. Don't judge them morally, any more than you judge your nose or hair. When you do admit and accept them, you will be much better able to control your behavior. In general, bring feelings—both yours and others'—out into the open as much as possible. When the other person is in an emotional state, get him to talk about how he feels, and when you feel agitated, find an opportunity to talk out your feelings.

—Marian Little



Personals



Dr. John Maughan, who has practiced medicine in Baxter since July 1959, became associated with the Jasper County Medical Center, in Newton, on October 1. Dr. Maughan served as president of the Jasper County Medical Society from 1964 through 1966 and is presently secretary-treasurer of the Skiff Memorial Hospital staff. He is a native of Leon, Iowa, and a 1958 graduate of the U. of I. College of Medicine. Dr. Maughan served his internship at Broadlawns Hospital in Des Moines before beginning private practice in Baxter.

Dr. Edward J. Hertko, of Des Moines, presided at the fifteenth annual Symposium on Internal Medicine held at Iowa Methodist Hospital in Des Moines on September 29. "Neurology and the Internist" was the subject of the meeting. **Dr. A. L. Sahs,** chairman, department of neurology, U. of I. College of Medicine, was one of the participants in a panel discussion.

Dr. Montague S. Lawrence, a heart surgeon at University Hospitals in Iowa City, spoke in Burlington on Monday, September 24, at a dinner meeting of the Southeastern Division of the Iowa Heart Association. The meeting was held at Hotel Burlington. Dr. Lawrence discussed new trends in heart surgery. He was introduced by **Dr. Robert L. Todd,** of Burlington.

Dr. Angelo Barbieri, who practices in both Garwin and Marshalltown, escaped injury when his car went into the ditch on the Green Mountain blacktop about 7:00 a.m. on Wednesday, September 18. Dr. Barbieri was en route to Marshalltown when the wheel of his vehicle slipped off the edge of the blacktop, pulling the machine into the ditch.

Dr. F. N. Cole, of Iowa Falls, has submitted a letter of resignation after 34 years as city health officer, a record term for a city official in Iowa Falls. Dr. Cole will be honored by the city councilmen of Iowa Falls with a special certificate of thanks.

Four faculty members from the department of obstetrics and gynecology at the U. of I. College of Medicine participated in a meeting of the Central Association of Obstetricians and Gynecologists at Oklahoma City, September 26-28. The Central Association's 1968 Prize Award Paper was presented by **Dr. Roy M. Pitkin,** who recently joined the U. of I. obstetrics and gynecology faculty as an associate professor. Title of Dr. Pitkin's award winning paper was "Transfer of Iodide Into Amniotic Fluid by the Normal and Nephrectomized Sub-human Primate Fetus." Dr. Pitkin, a 1959 graduate of the U. of I. College of Medicine, took his specialty training in obstetrics and gynecology at the U. of I. **Dr. Clifford P. Goplerud,** professor, spoke on "Human Placental Lactogen in Normal and Abnormal Pregnancy." **Dr. Charles A. White,** an associate professor, presented a paper on "Can Chemical and Cytologic Analysis of Amniotic Fluid Determine Fetal Maturity?" **Dr. William C. Keettel,** professor and head of the Obstetrics and Gynecology Department, discussed a paper on "Cuff Recurrences in Endometrial Carcinoma," presented by **Dr. A. E. Schultz,** of Madison, Wisconsin.

Dr. H. Rassekh, of Council Bluffs, has been selected as the new member of the Pottawattamie County Hospitalization Commission. Dr. Rassekh was appointed by the county's five district court judges. He replaces **Dr. Bernard Kenney,** who resigned September 1. The Commission conducts the hearings in mental cases.

Dr. Edward J. Hertko, of Des Moines, has been appointed medical director for the American Republic Insurance Co. Dr. Hertko is a graduate of the University of Illinois Medical School. He interned at Cook County Hospital and took his internal medicine residency at Hines Veterans Administration Hospital in Illinois. He has been associated with the Internal Medical Clinic in Des Moines since 1960. Dr. Hertko is a diplomate of the American Board of Internal Medicine, is a fellow of the American College of Physicians, and is Iowa coordinator for the American Diabetes Association.

Dr. C. Frank Judisch has joined the partnership of **Dr. Arthur C. Wise** and **Dr. R. D. Whinery** at the Ophthalmology Clinic in Iowa City. Dr. Judisch is a 1962 graduate of the U. of I. College of Medicine. He interned at Penn Hospital, in Philadelphia, spent two years in the Navy as an ophthalmologist at Corpus Christi, Texas, then completed his ophthalmology residency at the U. of I.

Dr. Rubin H. Flocks, professor and head of the urology department of the U. of I. College of Medicine, participated in a workshop on "The Role of Universities in Graduate Medical Education" held in Washington, D. C., on October 2-5. The workshop was sponsored by the Association of American Medical Colleges. Dr. Flocks represented the American Board of Urology, of which he is a past president and is currently serving as a member of the board of directors.

Dr. P. W. VanMetre, a Rockwell City physician for 50 years, has announced that he is retiring from the practice of medicine. Dr. VanMetre, who is 90 years old, came to Rockwell City in 1918 after serving as a medical missionary in Thailand. A native of Blairstown, Iowa, he graduated from the U. of I. College of Medicine in 1910, and did advanced medical work at Augustana Hospital in Chicago. Dr. VanMetre was medical consultant for the Women's Reformatory, in Rockwell City, for almost 50 years. Upon his retirement from that office early this year, he was honored by the state at a luncheon in February at the Reformatory and received a citation from **Governor Hughes.** A Fifty-year Club member of the Iowa Medical Society, Dr. VanMetre is now living at the Sunnyview retirement residence in Rockwell City.

Prevention of heart attacks was the subject on which **Dr. Donald L. Warkentin**, an Iowa City heart specialist, addressed the Page County Medical Society at the Clarinda Country Club on Thursday, September 19. While in Clarinda, Dr. Warkentin also spoke to the nurses of Page County on the care of heart patients.

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☐ Frequently NCME makes available published papers related to subjects presented on closed-circuit television.

A recent NCME hospital telecast presented Philip N. Sawyer, M.D., Professor of Surgery and Head of the Vascular Surgical Service at Downstate Medical Center, Brooklyn, N.Y., in a demonstration and evaluation of "Gas Endarterectomy."

In this program, Dr. Sawyer performs the operation on a patient with gross occlusion of the right iliac, femoral and popliteal arteries.

In Dr. Sawyer's view, gas endarterectomy has several advantages over mechanical methods: the operation can be completed faster, causes less damage to the arteries and offers a more successful outcome.

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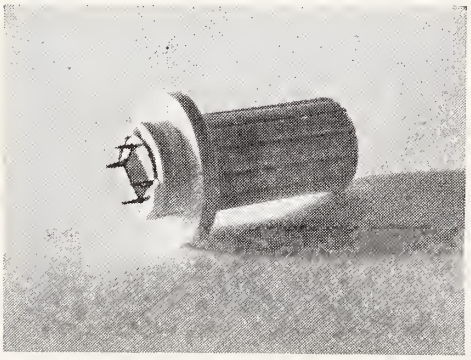


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The Benton County medical examiner, **Dr. C. E. Douglas**, of Belle Plaine, was the guest speaker at the September 10 meeting of the Benton County Peace Officers Association. The meeting was held in the Municipal Building in Belle Plaine. Dr. Douglas discussed the duties of a county medical examiner.

Dr. Michael Fox, of Marengo, left September 6 to serve with the Aviation Medical Corps in Vietnam. Dr. Fox, who had interned the past year at a hospital in Montreal, Canada, arrived in Marengo early this summer and worked in the office of **Dr. Burns Byram**, while awaiting a call for two years of military service.

Two medical instructors at the U. of I. College of Medicine, **Dr. George Perret**, a neuro-surgeon and chairman of neuro-surgery at University Hospitals, and **Dr. John B. Flege, Jr.**, professor of surgery, will join the hospital ship USS HOPE on October 13 for two months of service in Colombo, Ceylon. Dr. Flege served previously with the USS HOPE in Colombia, South America.

Twenty-seven physicians from the U. of I. and Veterans Hospital wrote articles for the recent nationwide number of THE MEDICAL CLINICS OF NORTH AMERICA. The 257-page, hard bound volume is devoted to RECENT ADVANCES IN CARDIO-VASCULAR DISEASE. Guest editors of the book are **Dr. Lewis E. January**, professor of internal medicine at U. of I., and **Dr. David C. Funk**, clinical associate professor of internal medicine at U. of I. and chief of the Cardiopulmonary Laboratory at Veterans Hospital.

Dr. C. W. Byrnes, of Dunlap, underwent major surgery on his left jaw bone at Mercy Hospital in Council Bluffs on Monday, September 30. Dr. Byrnes was injured in a car accident about a year ago and had his jaw broken at that time, but it had not healed properly.

Dr. Richard M. Caplan, associate professor at the U. of I. College of Medicine, was elected president of the Iowa Dermatological Society at the society's annual meeting held on Friday and Saturday, October 4-5, at the U. of I. **Dr. William Ziebell**, of Sioux City, was elected vice-president and **Dr. J. C. Timmerman**, of Iowa City, was elected secretary-treasurer.

Dr. William Kelly, a Waterloo dermatologist, was the guest speaker at the October meeting of the Fayette County Medical Society. "Occupation-

al Dermatoses" was the subject of Dr. Kelly's talk.

Five U. of I. College of Medicine faculty members participated in the annual meeting of the American Society of Anesthesiologists held in Washington, D. C. on October 19-23. **Dr. Jack Moyers,** professor and head of anesthesia, was a delegate of the Iowa Society of Anesthesiologists and also served as chairman of a reference committee. **Dr. Francois N. Abboud,** a professor of internal medicine, presented a postgraduate lecture on "The Rational Use of Vasopressors." **Dr. Martin D. Sokoll,** an associate professor of anesthesia, was a member of the scientific exhibits committee. **Dr. Azmy R. Boutros**, an associate professor of anesthesia, attended a medical writing workshop at the meeting, and **Dr. John L. Hoyt**, an assistant professor, attended the postgraduate lecture series.

Dr. Robert E. Hodges, professor of internal medicine at the U. of I., was chairman of a symposium on "Diet and Heart Disease" at the October 18 meeting of the American Dietetic Association, in San Francisco. Dr. Hodges also has been invited by the World Health Organization to participate in a conference of experts in nutrition to explore "Vitamin Requirements in Man." Meetings will be held in November and early next year in Geneva, Switzerland. At the first meeting, Dr. Hodges will discuss "Vitamin C Requirements."

Dr. William B. Bean, professor and head of internal medicine at the U. of I., presented the second John Leonard Memorial address before the Hartford (Conn.) Medical Society on September 16. Dr. Bean spoke on "William Osler and His Alter Ego, Edgerton Yorrick Davis."

Dr. William E. Connor, professor of internal medicine at the U. of I., spoke on the "Effect of Diet on Lipid Transport and Lipid-Transport Disorders" at an Excerpta Medica Foundation Symposium on September 19 in Montreal, Quebec, Canada.

John Clancy, M.D., and **Harold A. Mulford, Ph.D.,** both professors of psychiatry at the U. of I., participated in the 28th International Congress on Alcohol and Alcoholism held in Washington, D. C. on September 15-20. Dr. Clancy spoke on "Behavior Toward Alcohol Following Chemically Induced Apnea." Dr. Mulford's topic was "Alcoholics, Alcoholism, and Problem Drinkers: Social Objects-in-the-Making—The Experts' Contribution."



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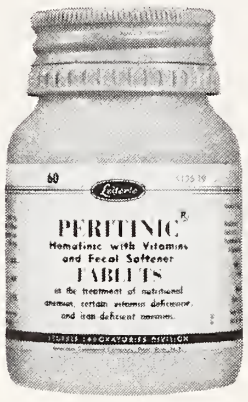
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At the October 2 meeting of the Johnson County Medical Society held at the University Athletic Club in Iowa City, members enjoyed a political dialogue with the First District Congressional Candidates, the **Honorable Fred Schwengel** (Rep.) and **Mr. John R. Schmidhauser** (Dem.).

A "Personals" item on page 987 of the September JOURNAL was inaccurate. Rather than a pediatrician, **Dr. James W. Hopkins**, of Des Moines, is a pediatric surgeon, and this past summer he was elected a surgical fellow and a member of the Surgical Section of the American Academy of Pediatrics. After graduating from Northwestern University Medical School, Dr. Hopkins had seven years of residencies in general surgery, pediatric surgery, and thoracic and cardiovascular surgery. Before coming to Iowa about a year ago he spent two years as chief of surgery and clinical director at the Fort Defiance PHS Hospital in the heart of the Arizona Navajo country.

Dr. Curtis G. Wuest, formerly of Amana, has joined **Drs. Edward L. Jacobs** and **David H. Winter** in general practice in Marshalltown.

On Friday and Saturday, September 20 and 21, the Iowa Obstetrical and Gynecological Society held a meeting, the first day at the Roosevelt Hotel, Cedar Rapids, and the second day at University Hospitals, Iowa City. About 40 member physicians attended. **Dr. Sprague Gardiner**, a professor of obstetrics and gynecology at the University of Indiana Medical School, Indianapolis, spoke on "Psychosomatic Office Gynecology," "Stress Incontinence" and "Sex Education," and joined **Drs. John Doran**, of Ames, and **Robert Kretzschmar**, of Iowa City, in a panel discussion of the third of those subjects. **Dr. Abe Mickal**, professor and head of obstetrics and gynecology at Louisiana State University Medical Center, New Orleans, talked on "Conization of the Cervix" and "Infected Abortions," and participated with **Dr. Parker Hughes**, of Des Moines, and **Dr. Charles A. White, Jr.**, of Iowa City, in a panel on "Outcome of Unengaged Vertex or Breech Presentation in the Primigravida." Dr. White spoke on "Prevention of Rh Sensitization by Rhogam," **Dr. W. C. Keettel**, head of obstetrics and gynecology at the U. of I., talked on "An Appraisal of Maternity Care in Iowa," and **Dr. William R. Anderson**, an associate professor of obstetrics and gynecology at the U. of I., spoke on "Hormonal Cytology."

On October 7 the Polk County Medical Society's popular Medical Forum of the Air resumed over KDPS, Des Moines. The station is operated by the

Des Moines Public Schools. The first program in the new series, designed to inform the public about medical conditions, was on the subject of allergies. The panel participants were **Drs. George G. Caudill, Joel D. Teigland** and **Robert R. Updegraff**, all of Des Moines. The panel moderator was **Lewis J. McNurlen, Ph.D.**, a professor of sociology at Drake University. Members of the Polk County Medical Auxiliary who assisted in handling the telephones and in screening the phoned-in questions were **Mesdames George G. Caudill, Robert R. Updegraff, Harold E. Eklund** and **Charles N. Hull.** The subject for the Forum on November 4 will be "Community Medical Facilities."

John H. Hege, Sr., M.D., has resigned his position with the Des Moines Child Guidance Center and has established a private consulting practice in psychiatry in Des Moines.

On September 17, **Dr. George G. Caudill** was chosen by his fellow members of the Board of Education of the Des Moines Public Schools as president of the group for the next 12 months.

On Tuesday, September 24, the Wright County Medical Society had as its guest speaker **Marvin H. Dubansky, M.D., a** Des Moines orthopedic surgeon. Dr. Dubansky talked about various techniques in the management of common fractures. In an effort to obtain excellent speakers for its meetings, the Wright County Medical Society charters an airplane to bring them from Des Moines to Clarion.

Dr. Carroll B. Larson, head of orthopedic surgery at the U. of I. College of Medicine, will serve as honorary surgeon-in-chief at Cornell University's Hospital for Special Surgery, in New York City, Tuesday through Friday, November 12-15. In addition to consulting with staff members and participating in teaching rounds, Dr. Larson will deliver the fifth Philip D. Wilson Orthopedic Lecture on November 14. His topic will be "When Arthroplasty?"

Dr. Larson is on leave so that he may serve as executive director of the Shriners' Hospitals for Crippled Children, of which there are 24 in three nations. As he has traveled about, to visit those institutions, he has been asked to lecture at many medical centers and to serve for brief periods as visiting professor.

Dr. E. Martin Gal, professor of neurochemical research at the U. of I., has been invited to attend an organization meeting for the establishment of an American Society for Neurochemistry.



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Dr. J. Richard Long has joined **Dr. A. W. Woodward** in the practice of urology in Waterloo. A Canadian by birth, he got his M.D. at Laval University, in Quebec City, and served his internship and two years of a surgical residency there. During the following four years he was a fellow at the Mayo Clinic, in Rochester, Minnesota, studying urology for three years and nephrology for one. Thereafter he returned to Canada for two years before locating in Waterloo.

Nine Iowans were among 1,518 surgeons inducted into the American College of Surgeons on October 17 in Atlantic City, during the organization's Fifty-fourth Clinical Congress. The class admitted to fellowship was the largest in history, and the ACS now has 29,000 members. The Iowa men are **Dr. Wendell A. Johnson,** of Ames; **Drs. James J. Kivlahan** and **Gary L. Smith,** of Burlington; **Dr. Patrick J. Callaghan,** of Decorah; **Drs. Frederick C. Blodi** and **Lawrence DenBesten,** of Iowa City; **Dr. John E. Griffin,** of Knoxville; **Dr. Robert E. McCoy,** of Mason City; and **Dr. Norman J. Siderius,** of Waterloo.

The OTTUMWA COURIER for September 25 contained an editorial telling of a letter the newspaper received recently from a doctor of medicine in Karachi, Pakistan, asking for additional details about a scheme that **Dr. L. H. Prewitt,** of Ottumwa, devised four years ago for calling motorists' attention to their mistakes. Dr. Prewitt had suggested that cards might be distributed on which people could report the license numbers of drivers whom they chanced to observe disobeying traffic laws. It was his idea that the motorists so reported need not be arrested, but could merely be warned by the police. The Pakistani doctor had read of the proposal in the November, 1964, JOURNAL OF THE IOWA MEDICAL SOCIETY.

Dr. John Rawls is to head the Cancer Crusade in Ottumwa next April. He was appointed during a meeting of the Wapello County Cancer Society on September 30. **Dr. Byron Peterson,** a Keokuk radiologist, was the guest speaker on that occasion, and **Dr. Richard Hastings,** of Ottumwa, chairman of the board of the American Cancer Society, Iowa Division, Inc., installed the newly elected officers of the county organization.

Dr. Edgar B. Wilcox, who has practiced medicine for sixty years in Oskaloosa, celebrated his

ninety-first birthday on September 15. Before locating there, he practiced for a year and a half in Nebraska. Since being involved in an automobile accident about six years ago he has given up surgery and really hasn't worked anywhere near full time. He and Mrs. Wilcox have a cottage near Brainerd, Minnesota, where they spend part of each summer, and they go south each winter.

At the second annual meeting of the Community Mental Health Centers Association of Iowa, in Fort Dodge on October 9, **Dr. Thomas Murphy,** of Cedar Rapids, was elected secretary of the organization.

Dr. Addison W. Brown, a Des Moines obstetrician and gynecologist and a past president of the American Cancer Society, Iowa Division, Inc., was the guest speaker at the Sac County Cancer Society's annual meeting in Sac City on October 15.

On October 13 **Dr. Frederick C. Brush,** of Mason City, completed his second tour of duty with the staff of *SS Hope,* this time in Colombo, Ceylon. He is a urologist.

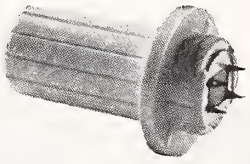
The Iowa Auxiliary of the Veterans of Foreign Wars presented a check for $1,038 to the U. of I. College of Medicine, early in October, to help finance cancer research there. **Dr. S. Fred Brunk,** an assistant professor of internal medicine, accepted the gift on behalf of the College.

Dr. J. H. Spearing, of Harlan, participated in a panel discussion of diets for athletes, at a meeting of schoolmen in Malvern, October 10. The other panelists were coaches and an Extension Division nutritionist.

Drs. Emmett V. Ayers and **Clarkson L. Kelly,** of Charles City, have been made members of the staff of St. Joseph Community Hospital, New Hampton, and have undertaken to perform operations there. They are replacing **Dr. Heinz Jacobi,** who joined **Dr. Russell S. Gerard, II** in the practice of general surgery in Waterloo in mid-October.

Dr. Roger A. Simpson, a private practitioner of otolaryngology in Iowa City, told the clinical congress of the American College of Surgeons, in Atlantic City on October 14, that the overuse of nasal sprays can turn the victim of stuffy nose and post-nasal drip into "a nasal medication addict." Such preparations shrink intranasal membranes, but they tend subsequently to expand even more than before.

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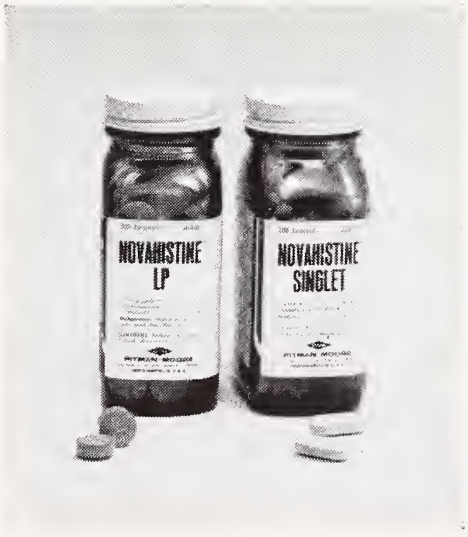
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DEATHS

Dr. Ingram C. Taylor, 63, of Columbia, South Carolina, died Tuesday, September 3, at the Veterans Hospital in Columbia. Dr. Taylor was a graduate of the U. of I. College of Medicine and served his internship at Mercy Hospital in Des Moines. He was a member of the American Medical Association, and Iowa Medical Society, and was a fellow-emeritus of the American College of Chest Physicians.

Dr. O. R. Prettyman, 77, of Manson, died at his home there on Thursday, September 19. Dr. Prettyman came to Manson in May, 1918 and practiced in the community for 50 years. He was a 1910 graduate of the Drake University Medical School.

Dr. George A. Jardine, 80, a physician at New Virginia for 42 years until his retirement in 1956, died Sunday, September 29, at Greater Community Hospital in Creston. Dr. Jardine was a 50-year member of the Masonic Lodge at New Virginia and a Fifty Year Club member of the Iowa Medical Society.

Dr. L. V. Schroeder, 63, of Walcott, died on October 10. Death was due to coronary thrombosis. Dr. Schroeder was born in Lost Nation, Iowa, in 1904. He graduated from the U. of I. College of Medicine, interned at Harper Hospital, in Detroit, and served his residency in surgery at the U. of I. He was a past president of the Scott County Board of Education, the Scott County Medical Society, and the St. Luke's and Mercy Hospital Medical Associations. Dr. Schroeder was a member of the Iowa Medical Society and the American Medical Association. He began practice in Walcott in 1930.

Dr. Walter Cary, 82, formerly of Dubuque, died on September 19, in Claremont, California, after a five-week illness. Death was caused by a cerebrovascular thrombosis. Dr. Cary graduated from the Western Reserve Medical School in 1913, and practiced medicine for 41 years in the Dubuque area. He retired and moved to California in 1955.

Dr. Loren Gale Peterson, 42, a Des Moines internist, and his wife died near Osceola, on Sunday, October 13 after the light plane that they were flying fell apart in the air. They are survived by a son, 16 and a daughter, 14. Dr. Peterson was a 1950 graduate of the U. of I. College of Medicine, he engaged in general practice for a couple of years following his internship, then he was in military service for a like length of time. He located in Des Moines after taking specialty training at the Ohio State University Hospitals.

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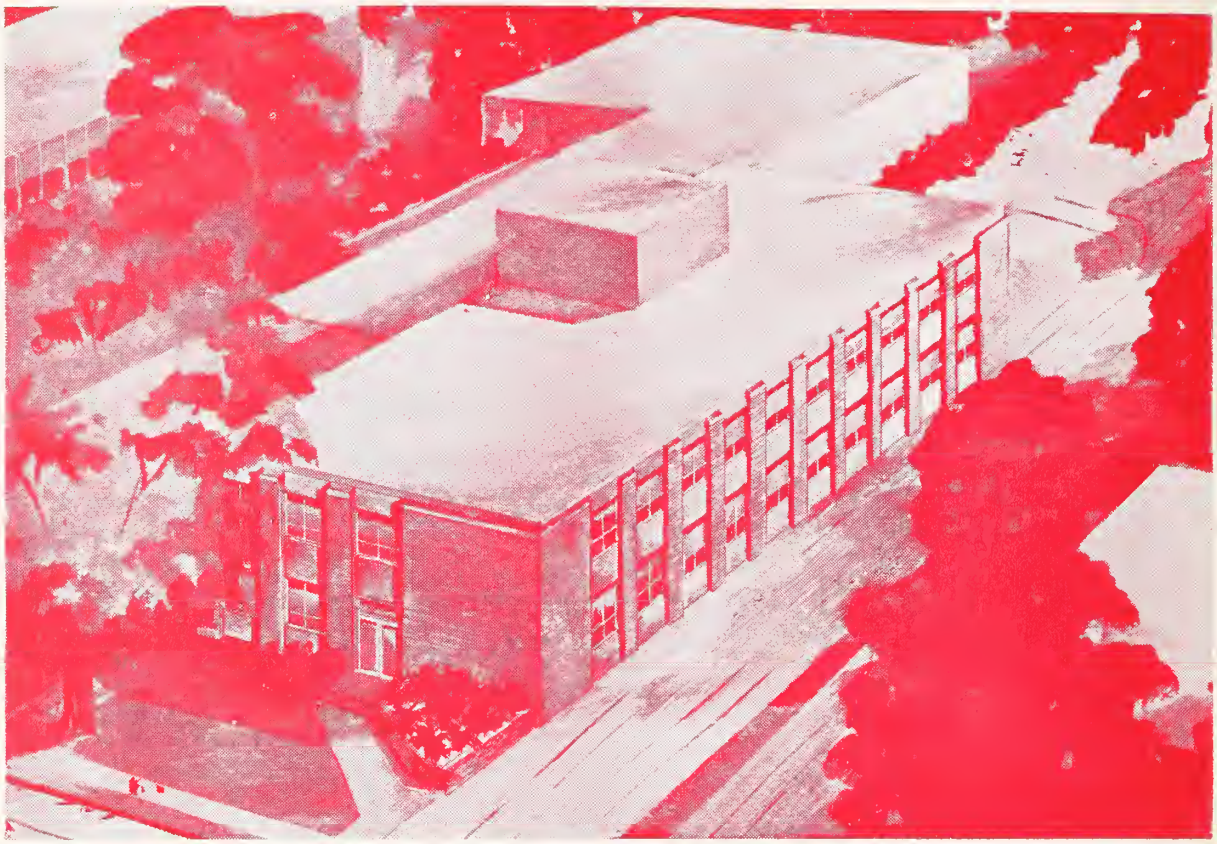
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- Analysis of the Election Results—David Broder, of the Washington Post
- Diagnosis and Management of Pediatric Jaw Fractures—M. L. Hale, D.D.S., M.S.
- Drug Therapy in the Management of Gastrointestinal Complaints—R. F. Maly, M.D.
- Correlation Between Fluorescent Treponemal Antibody Absorption (FTA-ABS) Results and Physicians' Diagnoses—Shirley S. Lindell, M.S., and F. P. Koontz, Ph.D.
- Pityriasis Rosea in Pregnancy: Case Report—R. W. Overton, M.D.



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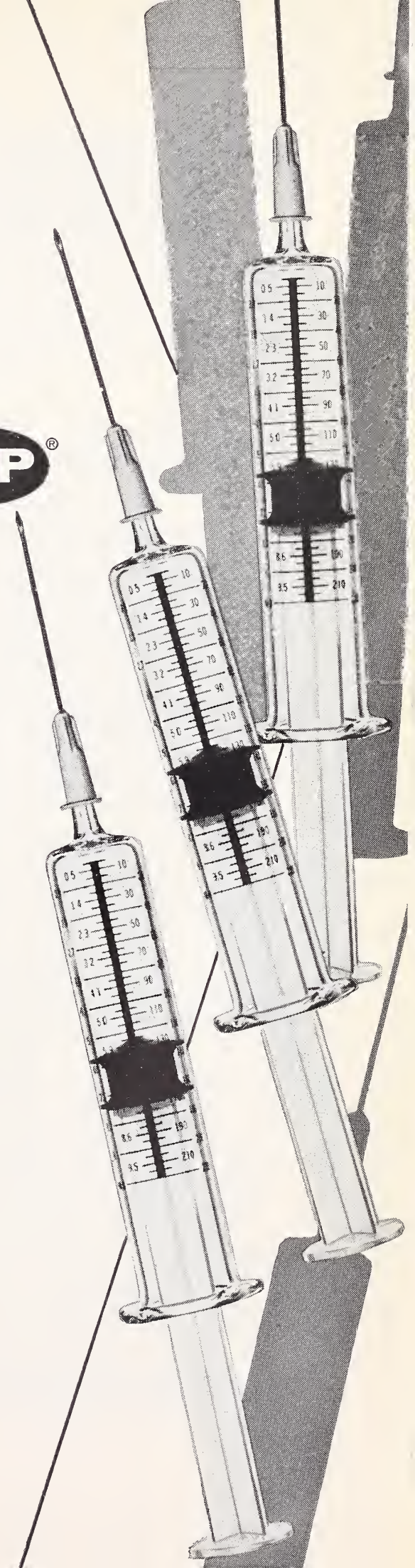
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Vol. LVIII December, 1968 No. 12

CONTENTS

An Analysis of the Election Results
David Broder, Washington, D. C. 1219

SCIENTIFIC ARTICLES

Diagnosis and Management of Pediatric Jaw Fractures
M. L. Hale, D.D.S., M.S., Iowa City 1227

Drug Therapy in the Management of Gastrointestinal Complaints
Ronald F. Maly, M.D., Des Moines 1231

Correlation Between Fluorescent Treponemal Antibody Absorption (FTA-ABS) Results and Physicians' Diagnoses
Shirley S. Lindell, M.S., and Franklin P. Koontz, Ph.D., Iowa City 1234

Pityriasis Rosea in Pregnancy: A Case Report
R. W. Overton, M.D., West Des Moines . . 1239

EDITORIALS

Merry Christmas 1241

A New and Definitive Test for Syphilis . . . 1241

Malaria 1243

Surgery for Perforated Diverticulitis 1245

Methotrexate Therapy in Advanced Dermatomyositis 1246

SPECIAL DEPARTMENTS

The Month in Washington 1215

Coming Meetings 1225

President's Page 1247

Journal Book Shelf 1248

Information from the Iowa Heart Association
The Late-Apical Systolic Murmur 1251

Iowa Association of Medical Assistants . . . 1253

The Doctor's Business 1255

State Department of Health 1256

Woman's Auxiliary News 1263

In the Public Interest facing page 1264

Personals 1265

Deaths 1279

Index to Volume LVIII, 1968 1281

MISCELLANEOUS

Insurance Profile of the Older Driver 1224

Current and Proposed IRMP Projects 1250

Physicians' Attitudes on Sex Counseling . . . 1252

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The Month in Washington

Washington, D. C.—Three-fourths of the Medicare Part B carriers now are using individual physician fee profiles in determining reasonable charges.

The Social Security Administration said that these carriers—which total 36—collectively process 80 per cent of the Medicare bills submitted by physicians. Prevailing fees continue as a major factor in the reasonable charges determined by the carriers.

The remaining 14 carriers which have not yet fully developed the individual physician fee profiles, or the computer capacity for using them, are employing other interim techniques. Some use fee schedules in addition to prevailing fees and others use relative-value scales or similar techniques in determining reasonable charges.

The medicare law calls for individual determinations by the carrier which take into account the customary charges of the physician and prevailing charges in the locality for similar services. In addition, according to the Social Security Administration carriers must determine that the charges they have designated reasonable for Medicare beneficiaries are not higher than charges for comparable services under comparable circumstances to their own policyholders and subscribers.

Payment is to be made on the basis of the lowest of those three criteria, or the physician's actual charge, if that is still lower, the SSA said.

"Making a reasonable charge determination involves checking each bill against compiled data on the individual physician's customary charges for similar services and the prevailing level of charges for such services in the locality in which the physician practices," the SSA said.

"The development of physician fee profiles," according to Thomas M. Tierney, director of Medicare "presents a unique challenge to both the SSA and the contracting carriers. At the time of Medicare's enactment, there was no industry-wide pattern in the health insurance field on the approach to reasonable charge determination.

"There is evidence now that the successful application of the guidelines interpreting the Medicare reasonable charge provisions, including the required development and use of individual physician fee profiles, is leading to a more systematized and consistent approach to the payment of physicians' bills in the health insurance field generally."

The Medicare hospital deductible will be increased from $40 to $44 January 1, 1969. The law specifies that if an annual review shows that hospital costs have changed significantly, the hospital deductible amount must be adjusted for the following year. Necessary increases in the deductible amount are to be made in $4 steps to avoid small annual changes.

* * *

The shortage of physicians, particularly general practitioners, was cited in a government report as a factor in the increase in physicians' fees since World War II.

The Bureau of Labor Statistics (BLS) reported that charges for medical care, including hospitalization, had risen at an annual rate of 3.9 per cent since World War II, while prices of all consumer items combined advanced at a rate of 2.6 per cent per year. The Bureau said that medical care prices had risen at a faster rate in recent years—6.6 per cent in 1966, and 6.4 per cent in 1967.

The report said that physicians' fees, while not advancing so rapidly as hospital charges, have more than doubled in the past 10 years. Hospital charges have more than quadrupled.

"The rise in physicians' fees during the 1946-67 period was partially due to the general rise in price levels and to the physician's need for increased income to cover his personal and business costs," the report said.

"This is especially true for the past two years. Doctors have tended to attribute their higher fees in recent years to general economic conditions and the higher cost of doing business. Nevertheless some charges clearly reflect the shortage of doctors. With an overload of patients, physicians in some cases have tried to discourage requests for house calls by raising the rate for such a service to a level that few patients are willing to pay. The postwar emphasis on medical specialists has also helped to boost physicians' fees, since general practitioners have become scarce and specialists, with their extra training, are able to command higher fees."

The number of GP's declined from 73,593 in 1963, to 68,920 in 1967, while the number of physicians in all categories was increasing from 276,475 to 308,475.

The BLS conceded that its reports on health-care costs fail to give adequate consideration to improvements in the quality of medical care as reflected in longer life spans, improved and more efficient techniques of treatment, shorter hospital stays, etc. "It is obvious that there are many problems of definition and measurement to be solved before any progress can be made in in-

troducing appropriate methods of measuring medical care price changes in a more meaningful way," the report said.

Two other federal developments dealt with medical care for the poor. The Board of Medicine of the National Academy of Sciences announced the start of a comprehensive, two-year study titled "Health and the Poor." A joint state-federal task force reported on its study of costs for medical and public assistance programs.

The Board of Medicine named a special panel for its study which will cover the quantity and quality of medical care that the poor now receive; existing federal programs, such as Medicaid, anti-poverty projects, maternal and child health programs, and community immunization programs; future needs and possible programs; and the economics of medical care for the poor.

Recommendations of the joint task force to the Department of Health, Education and Welfare included:

—States should draw samples to produce information on the current utilization of each of the medical care services offered, and their costs. The sample should provide data on how much of these costs are borne by the medical assistance program, and the amount that comes from other sources.

* * *

President Johnson signed into law a bill providing for tougher penalties for illegal traffic in amphetamines and barbiturates. LSD also is specifically covered.

The new law makes illegal possession, manufacture or disposal of the drugs a misdemeanor carrying maximum penalties ranging from imprisonment for one year and a fine of $1,000, to imprisonment for 15 years and a fine of $20,000. Leniency is authorized for first offenders.

Johnson praised the law as a measure that "will strengthen the hands of our police and give our families protection." He said it should "put the drug peddler in jail." But, he added, the active support of all Americans—both adults and young—is needed.

* * *

Richard M. Nixon will take over as President pledged to oppose national compulsory health insurance and federal control of physicians' fees. Highlights of his position on health care issues:—

FEDERAL ROLE IN MEDICINE

The role of the federal government in medicine should be supportive, never dominating. It should serve as a catalyst and should supplement private efforts only as needed.

MEDICARE

Although the program has been plagued by financial and administrative problems, it offers good potential if wisely administered.

Medicare must provide needed services at the lowest possible cost. The program could be endangered by a continuing escalation of costs.

More effort is needed to reduce dependence on costly hospitalization through better use of extended care facilities and increased use of outpatient care. Also needed is a re-examination of reimbursement formulas and experimentation with financial incentives to assure that the program encourages efficiency at all levels.

MEDICAID

"I favor the basic philosophy of Medicaid—that of helping medical indigents who need aid to meet medical expenses," Mr. Nixon has said. "Unfortunately, the program has fallen short of its expectations. . . . What is needed is a careful reassessment of Medicaid, especially at the local level, with full professional guidance, and emphasis on advice from physicians. There also is a need for simplification of literature and application forms."

NATIONAL COMPULSORY HEALTH INSURANCE

"I oppose a national compulsory health insurance program," Mr. Nixon declared, "because I do not want to lower the quality of medical care in the United States. Also, new health programs should be be geared only to persons in need. . . . I want to see that every individual who needs medical care is able to get it. But I want it to be good medical care. That's why I want to keep the doctors free from government control as much as possible, and why I oppose extension to a national compulsory health-insurance program for everyone."

COMPULSORY AREAWIDE HEALTH PLANNING

"I oppose compulsory areawide health planning," Mr. Nixon has said. "We can't assure communities better health planning just by making such groups compulsory. Areawide planning should be left to state and local determination."

FEDERAL CONTROL OF PHYSICIANS' FEES

"I oppose federal control of physicians' fees," the President-elect asserted. "Our system is an open, competitive market, assuring an individual the prerogative of setting a value on the services he performs. I would be just as opposed to infringing on this right by regulation of physicians' fees as I would be to regulating fees charged by the members of any other profession."

(Continued on page 1217)

The Month in Washington

(Continued from page 1216)

DEPARTMENT OF HEALTH

"As President, I intend to establish a Commission on Government Reorganization to study thoroughly the ways of increasing efficiency in government organization as well as making it more responsive to the people," he said.

MENTAL HEALTH

"We must develop new methods of treating the mentally ill. . . ."

TAX DEDUCTIONS FOR THE AGED

"The 100 per cent income tax deduction for non-reimbursable drug and medical expenses of those over 65 should be restored."

PREVENTIVE MEDICINE

"Preventive medicine is, in my judgment, both an opportunity and a major challenge to medicine," Mr. Nixon said.

"Automated mass screening programs would seem to have great possibilities even though they are generally still in their infancy and therefore cannot yet be gauged concerning their effectiveness in preventing chronic illness and reducing deaths. Information about these programs is still inadequate to warrant a broad federal program."

HILL-BURTON ACT

"As demand for hospital facilities increases, additional funds under the Hill-Burton Act for construction and modernization of such facilities will be required to supplement state and local efforts.

"To assure the most efficient use and distribution of Hill-Burton funds, a proposal for bloc grants in this area should be considered."

ABORTION LAWS

Regarding liberalization of abortion statutes, Mr. Nixon asserted, "Nothing should be done on the federal level. The abortion laws should be considered by each state, and should be acted upon by each state, depending upon the opinion in that state. . . . I do not think that a nationally-imposed law would be one which would be accepted in many parts of the country, and only when a state—a majority of people of the state—reach a conclusion that they want that kind of legislation, as they did in Colorado and as they may in the State of New York, should such a law be passed or considered."

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Omaha Sectional Meeting of American College of Surgeons

The American College of Surgeons will hold the first of three 1969 sectional meetings in Omaha on February 3-5. More than 500 surgeons are expected to attend, and the concentrated three-day program will be open to all doctors of medicine. Headquarters will be the Sheraton-Fontanelle Hotel.

Monday, February 3

GENERAL SURGERY

9:00 a.m. MEDICAL FILM

9:30 a.m. PANEL DISCUSSION: THE EMERGENCY DEPARTMENT

11:00 a.m. PANEL DISCUSSION: HEAD AND NECK TRAUMA

1:30 p.m. MEDICAL FILM

2:00 p.m. SYMPOSIUM: INFECTIONS. "Treatment of Empyema"—J. L. Ehrenhaft, Iowa City; "Sterilization of the Bowel"—Isidore Cohn, Jr., New Orleans; "Genitourinary Infections"—Grayson Carroll, St. Louis; "Septicemia"—K. E. Krantz, Kansas City, Kans.; "Rectal Infections"—C. A. Neumeister, Minneapolis

3:30 p.m. PANEL DISCUSSION: INFECTION CONTROL

Monday, February 3

ORTHOPEDIC SURGERY

1:30 p.m. MEDICAL FILM

2:00 p.m. PANEL DISCUSSION: ATHLETIC INJURIES

3:30 p.m. HOW-TO-DO-IT CLINIC. "Injuries to the Neck"—Don C. Wier, St. Louis; "Walking Cast for Tibial Fractures"—John L. Barnard, Jr., Kansas City, Mo.; "Elbow Fractures in Children"—Donald L. Lannin, St. Paul; "Trochanteric Fracture of the Hip"—H. R. Horn, Lincoln; "Management of Second Degree or Incomplete Tears of Ligaments of the Knee"—D. H. O'Donnoghue, Oklahoma City

Tuesday, February 4

GENERAL SURGERY

9:15 a.m. SYMPOSIUM: CANCER. "Carcinoma of the Esophagus"—H. A. Oberhelman, Jr., Palo Alto; "Carcinoma of the Uterus"—L. S. McGoogan, Omaha; "Adjuvant Chemotherapy of Tumors"—J. B. Aust, San Antonio; "Palliation of Cancer"—John Raaf, Portland, Ore.; "Preoperative Irradiation of Lung Tumors"—D. L. Paulson, Dallas

10:45 a.m. PANEL DISCUSSION: CARCINOMA OF THE COLON

1:30 p.m. MEDICAL FILM

2:00 p.m. HOW-TO-DO-IT CLINIC. "Jejunocolic Bypass"—S. A. Swenson, Jr., Omaha; "Pyloroplasty and Vagotomy"—J. M. Farris, Los Angeles; "Pancreatico-Duodenectomy"—W. H. Re-Mine, Rochester, Minn.; "Radical Neck Dissection"—J. H. Ogura, St. Louis; "Ileofemoral Node Dissection"—Charles Eckert, Albany, N. Y.

3:45 p.m. PANEL DISCUSSION: MALIGNANT MELANOMA

Tuesday, February 4

ORTHOPEDIC SURGERY

9:15 a.m. PANEL DISCUSSION: FRACTURES AND DISLOCATIONS OF THE UPPER EXTREMITIES

10:45 a.m. PAPERS: "Immediate Weight Bearing Following Lower Extremity Amputations"—S. A. Swenson, Jr., Omaha; "Cup Arthroplasty of the Hip"—Carroll B. Larson, Iowa City; "Herniated Disc in the Elderly"—K. G. Jones, Little Rock; "Osteotomy of Femur and Tibia"—M. B. Coventry, Rochester, Minn.; "Knee Fractures"—Foster Matchett, Denver

Tuesday, February 4

UROLOGY

1:30 p.m. MEDICAL FILM

2:00 p.m. PANEL DISCUSSION: IATROGENIC INJURIES TO THE URETER

3:30 p.m. PANEL DISCUSSION, URINARY INCONTINENCE

Wednesday, February 5

GENERAL SURGERY

9:00 a.m. MEDICAL FILM

9:30 a.m. PANEL DISCUSSION: INTESTINAL OBSTRUCTION IN INFANTS

11:00 a.m. HOW-TO-DO-IT-CLINIC. "Treatment of Pancreatitis"—W. C. MacKenzie, Edmonton; "Femoral Artery Obstruction"—J. E. Connolly, Irvine, Calif.; "Carotid Endarterectomy"—G. L. Hallman, Houston; "Pneumonectomy"—J. L. Ehrenhaft, Iowa City; "Transplant Immunology"—J. S. Najarian, Minneapolis

1:30 p.m. MEDICAL FILM

2:00 p.m. SYMPOSIUM: ORGAN TRANSPLANTS. "Bone Transplants"—George W. Hyatt, Washington; "Cardiac Transplantation"—R. D. Bloodwell, Houston; "Liver Transplants"—T. E. Starzl, Denver; "Tissue Typing"—Ronald Rolley, Richmond

Wednesday, February 5

UROLOGY

9:00 a.m. MEDICAL FILM

9:30 a.m. PANEL DISCUSSION: URETERAL REFLUX

11:00 a.m. PAPERS: "Undescended Testis"—D. R. Smith, San Francisco; "Bladder Tumor"—(speaker to be announced); "Carcinoma of the Prostate"—R. H. Flocks, Iowa City; "Space-Occupying Lesions of the Kidney"—Henry Kammandel, Omaha; "Radiotherapy for Neoplasms of the Genitourinary Tract"—H. B. Hunt, Omaha

An Analysis of the Election Results

MR. DAVID BRODER
Washington, D. C.

AFTER TRAVELING with a campaign all year, as I have been doing, one hardly knows what to do if he gets up in the morning and has no plane to catch. So you have provided me an opportunity to fly for at least one more day this year. Today's trip proved the adage, once more, that as in the campaign, no matter how early you start in the morning, by midday you are at least one hour behind schedule. I do want to apologize to all of you for my delays in getting here.

I have one personal story that I'll tell you. In discussions of campaign travel it always comes up. I am on the road a lot, but I am not in quite such bad shape as one of my colleagues. He came back from the campaign last weekend and found that his wife had put name tags on the children to help him through the awkward moments.

It has been a very close election, and up until noon, or a little earlier, yesterday, I didn't know whether I'd have any election results to discuss when I came out here today. I know that you have been sweating out a very closely contested Senate race, as well as the presidential campaign nationally. It has been the kind of election where it is very difficult to know, 24 hours after it was settled, what you should say in terms of analyzing or interpreting what has been going on. It seems that any generalization that you may want to make about this election can be supported by at least some pieces of evidence, but that anyone else can find some other pieces of evidence, equally applicable, to refute that generalization. When some 43 per cent of the people have voted one way, another 43 per cent have voted a second way and 13 or 14 per cent have voted a third way, it is a little difficult to figure out exactly what they were trying to say to us.

THE DEMONSTRATORS' PLACARDS

It is the same problem, I suppose, that political reporters faced throughout the campaign—trying to figure out what the voters are thinking. That is one of the reasons, I suppose, that whenever we were with a candidate we always looked around for the signs being carried by people in the crowd. That is one reason; another is the fact that, as you all know, the signs sometimes are fairly amusing and make pretty good copy. There is a whole genre of humor now, which appears on signs carried by pregnant women. It probably is a very old art form, but I first ran into it during Adlai Stevenson's 1956 campaign. He loved to tell one of these stories himself—about seeing a pregnant woman at one of his rallies carrying a sign saying, "Adlai's the Man!" This year that same joke was converted to "Nixon's the One!" But the funniest one that I can testify to, myself, was a sign at a McCarthy rally preceding the Indiana primary. It was being carried by a lady who looked as if she might be delivered at any moment. Her sign said, "McCarthy's the Dominant Gene!"

My favorite sign this year was not from a political rally, but from a peace demonstration up in New York. I don't know why it appealed to me as it did, but one of the marchers was carrying a sign which read, simply, "Insufficient Data!" Then there was a sign that I saw a couple of weeks ago while I was traveling with a candidate who shall be nameless. He was making a rather long speech to college students at Cutstown, Pennsylvania. About halfway through his really interminable harangue, some of the students held up a sign that had been hand-lettered for the occasion—obviously made on the spot. It said, "Say Something, Please!"

Mr. Broder is a political reporter for the WASHINGTON POST, and he made this presentation at a meeting for IMS Legislative Contact Men, in Des Moines on November 7, 1968.

I don't know what the election results mean to Mr. Nixon, and he really is the one whose interpretation of them is important to all of us. But I suppose he must have felt a little bit as if the voters had given him the same kind of endorsement that Eugene McCarthy had given to Hubert Humphrey late in the campaign. That endorsement had been compared earlier, when the observation was much more pertinent, to Cardinal Cushing's endorsement of Aristotle Onassis as a husband for Jackie Kennedy. It was said that either the Cardinal's or McCarthy's was the kind of endorsement that one should give only if he were prepared to add, in the next breath, that he was preparing to resign from his present position.

And I suppose there is the old story that also applies to Mr. Nixon's feelings. It is about the boss who was in the hospital for surgery. A group of employees from his office came to visit him, and conveyed the information that during a coffee break his staff had taken a vote and had decided, 14 to 12, that they should wish him a speedy recovery.

OUR POLITICAL SYSTEM NARROWLY ESCAPED DISASTER

I had plenty of time to read the papers this morning, on the seemingly interminable flight out here, and the thing that struck me about the comments that I read was that the papers were taking a rather gloomy view of the election results. I think the thing that stands out is pretty obvious: Mr. Nixon *has* won, and though his margin was narrow, he *is* the president-elect, *and that our system has survived a very rigorous test indeed.* The report I want to give you and the thought I want to share with you is rather deliberately to emphasize what you might call the affirmative or the upbeat aspects of his election.

As for the newspapers, the WALL STREET JOURNAL, for example—a paper that I should have expected to exult in a Republican victory—had a lead story saying that it wasn't a very good election. It talked about a "mushy mandate," and a "deeply divided electorate." It predicted warfare between a Democratic Congress and a Republican Administration. It said the Democrats would plunge into intra-party warfare as bitter as if they had been trounced. Well, I choose to look at this thing from the other side of that proposition. If that is going to be the president-elect's interpretation of the election, I should like to argue to you, or to put forward for your consideration that this has been an election in which nothing valuable has been lost, and considerable may have been accomplished. I am not going to go to the fatuous extreme of saying that there haven't been individual casualties among the candidates, or that those are not regrettable. But this is a year which, in my view, has been from the beginning one in which the vital question was not who would be elected, or which party would control the White House, but rather whether the political system itself would prove workable under the stresses and strains that were operating in this country. And the first point that I wish to make is that this system—the political system for choosing a president—did come through! It yielded a clear winner, a winner whose mandate from the people I think is unquestioned. And it did so without giving bargaining power to the third party or any splinter group, and without tossing the election into the House of Representatives and making us face a prolonged period of indecision, of crisis, and in my view something approaching political anarchy.

ELECTION REFORM MUST NOT BE POSTPONED

I hope the fact that it worked this year is not going to lessen or remove the spur for some of the needed changes in this system of choosing a president. Personally, I have been persuaded, in recent years, by the arguments for the direct popular election of the President. I do think that the problems we are having in determining who is the popular-vote winner this year raise a serious caution about that system. If we are going to go to that arrangement by means of a Constitutional amendment, we shall certainly have to make a provision for more accurate and more uniform and more confidence-inspiring vote-counting procedures in the several states than we have now.

I was wakened a little after midnight this morning by a call from my office reporting that a sudden addition of 50,000 more votes had been made to the Humphrey total in the State of Alabama. By making a couple of phone calls to Alabama, I found out what had happened there. Alabama, it developed, is one of those states in which the names of the presidential candidates do not appear on the ballot. Only the names of the electors supporting the re-

spective candidates are on the ballot. Mr. Humphrey, through some strange set of circumstances, had had two separate sets of electors in Alabama. If he had been in a truly competitive position—which, of course, he was not, since Wallace carried the state by a landslide majority—those 50,000 votes still would not have done him any good, for only the votes cast for the first of his two slates of electors would have been counted. But the wire services, in trying to assuage the public's curiosity about which candidate had polled the larger popular vote nationwide, Mr. Nixon or Mr. Humphrey, had decided that they should recognize the votes cast for both of Mr. Humphrey's two sets of Alabama electors. I mention that only to illustrate the kinds of problems which we can now foresee, as a result of this year's election, if we are to consider changing to a system providing for election by cumulative popular vote.

OUR PRESENT SYSTEM COULD DISENFRANCHISE SEVERAL STATES

If we don't go that far, it seems to me that we have great need to tighten up some of the provisions governing the present electoral college. Arbitrary and unwarranted power is given to a few people to choose the public's President. I can see no justification, for example, for the notion that electors who are unknown to most of the voters have some sort of right as individuals to bargain with their electoral-college votes. Nor does it seem to me that they should have the right to give a proxy to their presidential candidate, like that which Mr. Wallace apparently obtained from many of his electors, so that he might take the electoral votes which he had won and use them for bargaining purposes. I think we must tie the electors down to support the candidates who received a plurality in their state.

Secondly, it seems to me that on the basis of our experience this year, we really must come up with some alternative for throwing the election into the House of Representatives if there is no electoral-college majority. The prospect of that happening this year was truly horrifying, and I don't want that to be forgotten now that it has turned out not to be the case. A system which gives each state delegation one vote for president, regardless of the size and population of that state, and which acts to disenfranchise entirely any state which has an evenly divided Congressional delegation, is not a defensible system, in my view.

In Illinois, your neighboring state, can you imagine the consternation that would reign today if the election were thrown into the House of Representatives, and the voters of Illinois found that they were to have no voice in the choice there, because their state happened to have chosen 12 Republicans and 12 Democrats in its Congressional delegation? In the part of the country that I come from, Washington, D. C., none of the jurisdictions in which my paper circulates could have had a voice in choosing the President. The District of Columbia has no seats in the House of Representatives, and there is no provision for residents of the District of Columbia to have their votes count if an election goes into the House. Maryland and Virginia, as it happens, each selected an additional Republican congressman in this election, producing an evenly balanced delegation for each of them. It is hardly conceivable to me that the voters of Maryland and Virginia should be penalized by the action of the voters in a single district in choosing a Republican rather than a Democratic congressman, to the extent of losing their votes in the choice of a president! We really have to do something about that! I may have dwelt on this overlong, but I just don't want this point forgotten in our collective sigh of relief that the election was not thrown into the House this time.

THERE MUST BE TWO HEALTHY PARTIES

My second major satisfaction is that the two-party system has survived this election. It has survived two threats that seemed quite serious —the third-party threat represented by George Wallace turned out in a year of very, very strong emotions, of strong public dissatisfaction, not to have been the strong power that we had feared it would be. Even in this year, almost nine-tenths of the voters finally marked their ballots for the candidate of one or the other of our two major parties. Governor Wallace failed to receive enough electoral votes to have the balance of power in the election. The share of the popular vote that he drew turned out to be smaller than that of the short-lived Progressive Party of 1912 or that of the equally shortlived Progressive Party of 1924, and it certainly would be my hope—though one

cannot predict it at this point—that the fears and the frustrations that fed the Wallace rebellion this year will have dissipated sufficiently by 1972 that it also will prove to have been a temporary phenomenon in our politics.

The other threat, which could have proved quite serious, was the blow-up of one of the two major parties. It also did not materialize. Indeed the Democratic Party appears to be in remarkably good shape—unbelievably good, when one considers what a shambles it was in at the close of the Democratic Convention in Chicago just two months ago. It is almost incredible, when you look at it, that a party confronted by an unpopular war and serious divisions at home, with an incumbent President who had determined as long ago as last March that it was impossible for him to be renominated and reelected, could have gone to the people with a candidate supported by and identified with that administration, and *almost* won the election. I think that says something about the basic strength of the Democratic Party. Hubert Humphrey comes out of this election not a repudiated leader, but as one with clear credentials for continuing a leadership role in his own Party and in national politics. In addition, the Democrats have found some new leaders or prospective leaders on the national scene—Senator Muskie, Senator Edward Kennedy, Senator McGovern and perhaps I should add Senator-elect Hughes, of Iowa.

Let me make this one other comment. You may wonder about why I dwell so much upon the health of the opposition party in this two-party system. The reason is this. The Republican Party blew up at its Convention in 1964, and the results of that occurrence in the 1964 election had consequences which in no way reflected the real balance of forces or the real mood in this country. The Johnson landslide of 1964 was an unnatural political phenomenon. Much of the legislation that stemmed from it I think went far beyond what this country was really ready to support. I think the violent swings, back and forth, when there has been the kind of eruption in a major party which hit the Republicans in 1964 is unhealthy for the country, let alone for those who are interested in the political fortunes of that particular party. When two of the last three presidential elections turn out to be as closely contested as the 1960 and 1968 elections have been, I think you can conclude only that the voters of this country are skeptical that either party has a real monopoly on solutions to the problems that confront us. As one who shares that skepticism, I believe that the only way in which we are really going to find the "solutions for the '70s" and "policies for the last third of the century," which the candidates talk so much about, is by keeping both parties under the spur of the most intense kind of two-party competition, such as you have had here in Iowa during recent years, and such as we now have in this country. That is why I have been concerned—not on a partisan basis—about the health of the Democratic Party.

Third, I think this election has clearly been good for the Republican Party. It has shown the Party to have the requisite resiliency to come back from a catastrophic loss such as it suffered in 1964, and to win the White House, even by the narrow margin that it achieved last Tuesday. It further strengthened the Republican Party in that area where in my view the Republican record most deserved commendation from the public—in the area of state government. Here in Iowa and in five other states, this week, Republican governors were elected to replace Democratic governors. In my view the Republican Party has been a two-headed elephant for too long, for national policies have too long been dictated by what I should call a permanent minority of Republicans in the Senate and in the House of Representatives, whereas the real strength and skill of the Party has largely been lodged in the state capitols. I believe that with the further gains that have been made by the Republicans in the statehouse races this year, we shall begin to see the kind of relationship between Republican governors and a Republican President that will bring the Republican Party ever more closely into touch with the political realities of this country today. It is true that the Republicans made virtually no gains in the House, and smaller gains in the Senate than they had hoped for. Some of you want to conclude that that also reflects justly the Republican record, and I shall not argue that point.

MR. NIXON IS INTELLIGENT AND COMPETENT

Fourth and finally, Mr. Nixon has come through the election, and I think he has come through it in a strengthened position. I should

like to talk with you very frankly about this, and I hope that I can talk in a manner that will not offend any partisans of either of the candidates in this past election. I have been watching Mr. Nixon—a fascinating and complex personality—as a political reporter now for about 13 years. I think he is a highly intelligent and thoroughly competent but not a particularly lovable man. And I think that in all of the partisanship that has filled the past two or three months of this campaign, we are fortunate that the kind of attacks that could have been made upon what some people see as his basic character were not made, nor by anything that he did in this campaign did he invite such an attack from his political enemies, by accusing them of unfairness or of underhanded tactics. So as much as any man can, in our partisan political system, I believe he comes to the White House with the good will and the tolerance of those whom he has defeated, and obviously this is important, since the party that lost the presidential election remains in control of the other major areas of government.

HE MUST MAKE HIMSELF EVERYBODY'S PRESIDENT

Having said that, I want to make just one other point. Mr. Nixon planned his own campaign. He planned it, really, even from a point before the 1964 Republican Convention, which he knew would yield a Goldwater nomination, and which he also knew would yield a Republican defeat. He adhered to that plan throughout four years, and he is entirely deserving of the praise and the sense of pride and accomplishment, and the self-confidence that go to a man who has had the courage to stick to what *he* has decided is *right for him!* He has had the courage, the tenacity and the energy to pursue his objective through all the miles and the days between then and now.

I should hope that even in this moment of satisfaction which he deserves, he would also learn something from the closeness of the victory that he has won. His campaign—particularly the general-election campaign, after Miami Beach—was a curiously limited and circumscribed campaign. He talked mainly in controlled settings—at his own rallies and on his own television programs. His audiences were predominantly those white, middle-class, suburban voters who did, in fact, give him his majority. He did not reach out to, and he did not get any response—either in person or at the polls last Tuesday—from the others in this country, from the blacks, from the Mexican Americans, from the poor and the city dwellers, who also are parts of this country. And I hope that he will follow through on his promise to make his an "open" presidency, that offers two-way communication with the dissident and the disadvantaged elements in our society, an administration which will, in his phrase, "build some of those sorely-needed bridges to human understanding."

I hope too that quite immediately, when he is assembling his cabinet and putting together his administration, he will be mindful of the public's reaction to his choice of Governor Agnew as his running mate, and that as he has promised, he will choose men of unquestioned talent and diversified viewpoints to fill his administration. If he does this, I believe that despite all of the gloom about inevitable war between him and the Democratic Congress, he has a real opportunity to make progress toward achieving the goals that this country has in mind—goals of peace in Vietnam, and of order and progress here at home.

There may be some of these areas that you would like to explore particularly—for instance policies, plans, personnel, and relations between the Nixon Administration and the Democratic Congress—but I should prefer to leave those specific topics to be chosen by your questions, if we are to have a question-and-answer period.

CAMPAIGN WORKERS DESERVE GREAT CREDIT

I should like to close with just one final thought. I said at the beginning of this talk that nothing vital, in my view, has been lost in the election. And yet in human terms there were terrible sacrifices, in this campaign year, that were not in any sense repaid by the victories, and in most instances led only to defeat for those who paid the price. And without being overly sentimental, I hope I may close by mentioning some of those who gave so much to politics this year and got so little in return.

There were good men who literally gave their lives to politics in this country this year. I was reminded of that fact when Frank Mankiewicz happened to be on the plane on which I traveled from Washington to Chicago

this morning. I couldn't help thinking of what he must have been going through this week, thinking back, as I am sure all of you must have done, to that early morning in Los Angeles where he faced the television cameras to break the news to the nation of Senator Robert Kennedy's death. Far more common, but far less heralded, have been the contributions of men like Dave Stanley, in your own state, and many others in this election, for I have never known a year when there were more close contests between candidates who campaigned with all that they had to give, only to see themselves lose by what must have been for them, heartbreakingly narrow margins. There are an awful lot of people like that, this week, in this country.

And even beyond the candidates, who at least have had the compensation of being momentary celebrities, doing what they wanted to do and reaping a certain ego satisfaction, I am thinking of all the people who poured the coffee at the political receptions, and who licked the stamps, and who raised the money—of the young people who went out door-to-door canvassing, probably most of them on behalf of causes and candidates that didn't win.

We in the newspaper business, or in the employ of other communications media, do not convey very well the vastness of the civic enterprise of people like that in an election campaign—people who bring their enthusiasm to the task of electing candidates, in races that are all decided in a matter of a few hours, and those decisions, no matter how narrowly reached, are binding for two years, four years or even more. As a political reporter I can tell you honestly that it is the decency and the dedication of those people, the volunteers that you meet in every community you go into, across this country in the course of a campaign, that really sustains your faith in this marvelous open, free political system that we have!

I congratulate you doctors and your organization on your own participation in politics. I hope that whatever the results were this year—whether your candidates and causes won or lost—that the contest will serve only to whet your appetite for politics.

Thank you for letting me share this meeting with you.

Insurance Profile of the Older Driver

THE WALL STREET JOURNAL for November 8 contained some evidence that the elderly automobile driver is pretty respectable, from the casualty insurer's point of view at least.

American Maturity Insurance Co., Philadelphia, the newspaper reported, specializes in insuring drivers at least 55 years old, and has some 15,000 policies in force. In a study of 100,000 policy applications, it found that older drivers may be better bets than younger ones. According to the statistics, older drivers drive an average of 6,600 miles annually, sharply lower than the 11,000-mile-a-year average for all adults. Some 8 per cent of the older drivers drive their cars to work, compared with five or six times that proportion in the general population.

And the study showed that older drivers own older and less expensive cars, which presumably means lower claim costs. They are one-third as likely to own two cars.

Finally, the company reported, only 10 per cent had had a reportable accident during the five years preceding application, and only 8 per cent had had a moving-traffic violation in the same period.

January Short Courses in Omaha

Electrocardiography and gastrointestinal blood loss will be the topics discussed during short courses at the University of Nebraska College of Medicine in January.

Dr. William Angle will be coordinator of a course on basic electrocardiography January 17 and 18. Dr. Angle is associate professor of internal medicine at the College of Medicine. Registration for the course is $30 and includes one luncheon. The course carries 9 hours of credit in Category I with the American Academy of General Practice.

The diagnostic significance of acute and chronic gastrointestinal blood loss will be considered at the conference on January 23. The coordinators will be Drs. Henry Lemon, and Fred F. Paustian, professors of internal medicine. The course offers six hours of AAGP credit in Category I. The registration fee of $20 includes one luncheon.

Both courses will be conducted in the University of Nebraska School of Nursing auditorium, on the Medical Center campus in Omaha.


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COMING MEETINGS

IN STATE

Dec. 5-6 **Postgraduate Course on Cardiac and Respiratory Disease,** U. of I. College of Medicine, Iowa City.

Jan. 16 **Iowa Obstetrical and Gynecological Society,** Iowa City.

Jan. 16-18 **Postgraduate Course in Obstetrics and Gynecology,** U. of I. College of Medicine, Iowa City.

CONTINENTAL U. S.

Dec. 1 **10th AMA National Conference on Medical Aspects of Sports,** Hotel Deauville, Miami Beach.

Dec. 1 **1968 Annual Meeting, American College of Nutrition,** Hilton Plaza Hotel, Miami Beach.

Dec. 1-4 **Clinical Meeting, American Medical Association,** Miami.

Dec. 1-6 **Radiological Society of North America, Inc.,** Palmer House, Chicago.

Dec. 4-6 **Academy of Psychosomatic Medicine,** Eden Roc Hotel, Miami Beach.

Dec. 6 **Symposium on Shock,** St. Luke's Hospital, 44th and Wornall Road, Kansas City, Missouri.

Dec. 6-7 **New Mexico Regional Meeting, American College of Physicians,** Sheraton-Western Skies Motel, Albuquerque.

Dec. 7-12 **27th Annual Meeting, American Academy of Dermatology,** Palmer House, Chicago.

Dec. 9-10 **Symposium on Gynecology and Obstetrics,** Battenfeld Auditorium, University of Kansas Medical Center, Kansas City, Kansas.

Dec. 9-11 **Southern Surgical Association,** Boca Raton Hotel and Club, Boca Raton, Florida.

Dec. 9-12 **Postgraduate Course on Pulmonary Function in Health and Disease sponsored by Louisiana Thoracic Society,** Tulane University School of Medicine, New Orleans.

Dec. 10-14 **American Academy for Cerebral Palsy,** Americana Hotel, Bal Harbour, Florida.

Dec. 14 **Arizona Regional Meeting, American College of Physicians,** Phoenix.

Dec. 16-18 **Twenty-second Postgraduate Assembly in Anesthesiology, New York State Society of Anesthesiologists,** New York City.

Jan. 12 **Crisis Recognition and Treatment,** University of Colorado School of Medicine, Denver.

Jan. 12-17 **Annual Meeting, Society of Cryosurgery,** Hilton Plaza, Miami Beach.

Jan. 13-18 **General Practice Review,** University of Colorado School of Medicine, Denver.

Jan. 16-18 **Colorado Regional Meeting, American College of Physicians,** Broadmoor, Colorado Springs.

Jan. 17-18 **American Society for Surgery of the Hand,** Americana, New York.

Jan. 17-18 **Basic Review of Electrocardiography sponsored by University of Nebraska College of Medicine,** Omaha.

Jan. 18-23 **American Academy of Orthopaedic Surgeons,** Americana Hotel, New York.

Jan. 20-24 **Internist and Total Cancer Care sponsored by American College of Physicians,** McGregor Memorial Center, Wayne State University, Detroit.

Jan. 23-25 **Southern Society for Clinical Investigation,** Jung Hotel, New Orleans.

Jan. 23-25 **Third Annual Radiotherapy Symposium,** Sheraton-Four Ambassadors Hotel, Miami.

Jan. 23 **Diagnostic Significance of Acute and Chronic Gastrointestinal Blood Loss,** University of Nebraska Medical Center, Omaha.

Jan. 26-29 **Society of Thoracic Surgeons,** Hilton Inn, San Diego.

Jan. 27-29 **33rd Annual Session of International Medical Assembly of Southwest Texas,** San Antonio Convention Center, San Antonio.

Jan. 31-Feb. 2 **13th Annual Southern Radiological Conference,** Grand Hotel, Point Clear, Alabama.

ABROAD

Dec. 1-7 **12th International Congress of Pediatrics,** Mexico City.

Dec. 7-9 **First National Conference on Infectious Diseases,** Bombay, India.

Jan. 18-20 **1st National Congress on Diabetes,** Madras, India.

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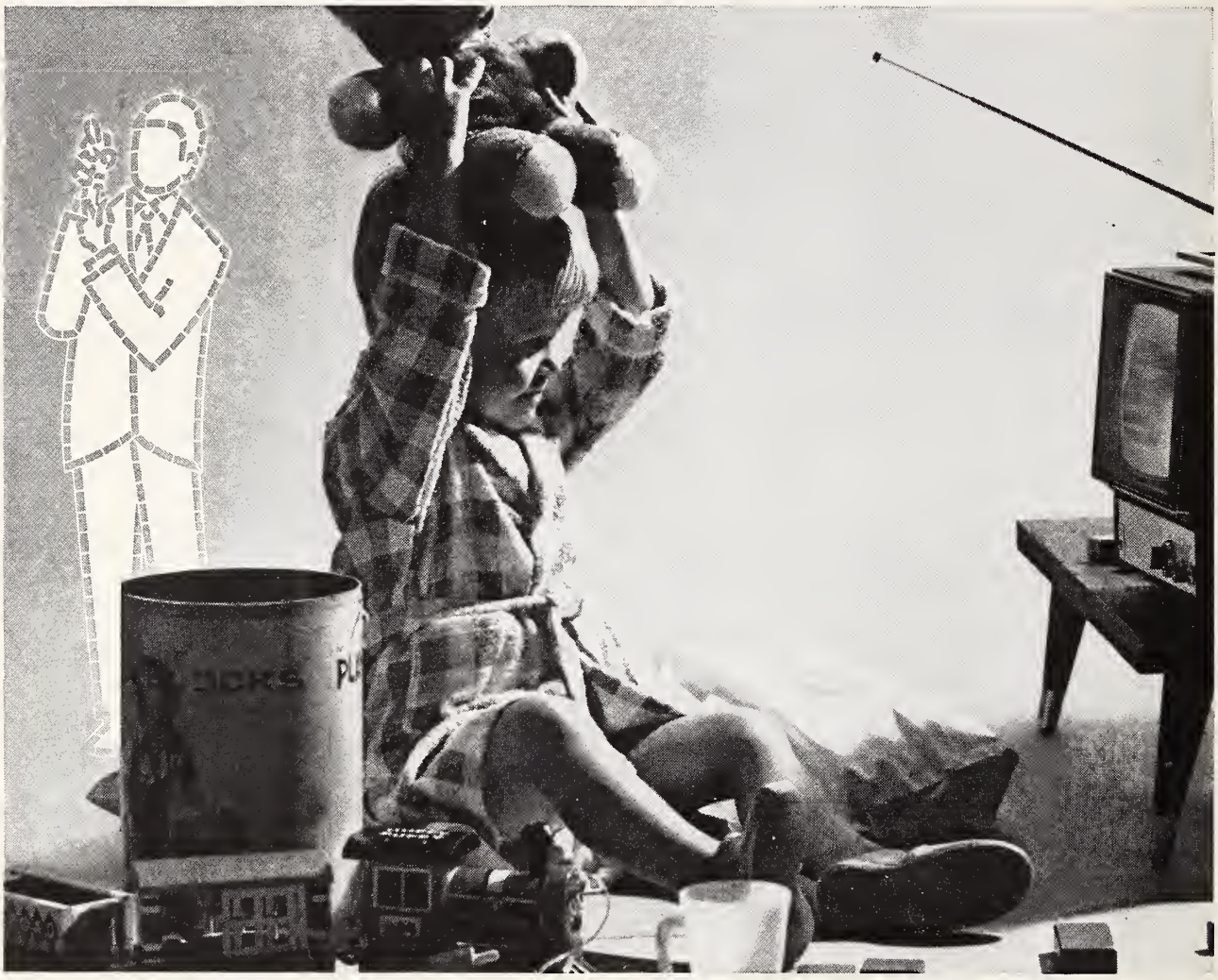
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Scientific Articles

The Diagnosis and Management of Pediatric Jaw Fractures

M. L. HALE, D.D.S., M.S.
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PEDIATRIC JAW FRACTURES are more complex to diagnose and treat than are similar injuries in adults. The deciduous or mixed dentitions, the growth and development factors in this patient group, plus, frequently, greater apprehension and less cooperation on the part of the patient are only some of the additional complexities associated with such injuries.

One of the most important considerations in the management of pediatric fractures is that the surgeon has a comprehensive knowledge of the growth and development of the jaws and dentitions. Long-term growth and development studies based on cephalometric measurements have brought to light some important and factual findings pertinent to an intelligent understanding of the growth and development patterns in children's jaws.

From cephalometric studies we now know that deficiency in arch length is the most frequently encountered cause of malocclusion.[1] It has also been established that no increase in arch length is occasioned by growth from first molar to first molar positions after those permanent teeth have erupted.[1] Actually there may even be a very slight dimensional decrease as the permanent incisors in the mandible erupt lingually to the deciduous incisors, over the symphysis.[1] These facts relating to the growth potentials in children's jaws have been studied and reported.

Therefore, on the basis of interference with growth patterns, fractures occurring in children through or anterior to erupted six-year molars are less likely to result in injuries that may cause arch or facial disharmonies in these sites. However it should be apparent that in this age group severe trauma to, or a fracture through, the bony areas posterior to the six-year molars necessitates a careful appraisal and evaluation to determine the necessary treatment and method of operation that will minimize the surgical trauma to the growth center, and yet effect a satisfactory end result.

In this regard it is of interest to note that in one study of a large series of jaw fractures, less than one per cent had occurred in children under six years of age.[2]

It has been determined cephalometrically that growth does not occur in a steady, gradual development. Rather, there are periods of slow growth, followed by periods of more rapid

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growth (Table 1).[1] Therefore, in a surgical appraisal of fractures involving centers of growth and development, it seems logical to predict that there will be fewer deforming results if the injury was incurred and was treated successfully during a period of "slow growth" than during a period of proved "rapid growth."

TABLE 1

CEPHALOMETRIC SUMMARIES—GROWTH OF JAWS

Rapid Growth Period	Slow Growth Period
From birth to six months (to provide anterior-posterior arch length to receive the deciduous dentition).	From six months to four years.
From four to seven years (to permit the eruption of the six-year molars and the development of space for the formation of the second molars).	From seven to 15 years.
From 15 to 19 years (to provide space for the development and eruption of the third molars).	From 20 years, no growth potential.

Several statistical research studies of cephalometric projects have been carefully reviewed, and the following facts appear to be well documented as regards facial growth. "In the first five years 78 per cent of height, 85 per cent of width and 82 per cent of depth have been achieved. This means that at the age of six years approximately 20 per cent of the growth increment remains as an avenue for possible readjustments," Higley, Hixon and Merideth have found.[1] Thus it would appear that from six years of age onward, fractures anterior to the first molar positions in either jaw are not as likely to produce any injury to growth and development, since for all practical purposes those areas are already well developed. However such trauma could conceivably produce injury to centers of growth elsewhere through the transmission of force with or without a resultant fracture to the growth centers. In the text FRACTURES OF THE FACIAL SKELETON, Rowe, and Killey report that greenstick fracture of the condylar neck in a child under five years of age can be expected to heal rapidly with only minimal treatment, and is unlikely to interfere with condylar growth.[3] In contrast, they state that occasionally a severe fracture dislocation or a badly comminuted fracture of the ramus that is compounded externally will lead to an injury to the growth center by direct trauma or subsequent infection, and from these severe injuries there may result an arrest of growth and development, with ultimate facial deformity from resulting asymmetry.

In summary, therefore, from ages six to 20 years we are especially concerned with traumatic injuries to the four parallel suture lines related to growth centers connected with the maxilla, and to the hyaline cartilage region in the condyles of the mandible. The severity of injuries to these important centers of growth and the extent of the growth potential already reached at the time of such an injury should help establish the surgical evaluation and the treatment procedure of choice for each patient.

In their statistical study of 500 fractured-jaw cases, Rowe and Killey observed that the frequency of such injuries to patients under 20 years of age, as compared to those over 20 years, was approximately 21 per cent (Table 2).[3] Therefore one out of every five fractures, percentagewise, could conceivably require an awareness and a surgical evaluation of possible injury to centers of growth and development.

TABLE 2

FRACTURE FREQUENCIES BY AGES*

Age Years	Number of Fractures	Percentage of Total
0-5	6	1.2
6-11	18	3.6
12-19	81	16.2
20-29	189	37.8
30-39	78	15.6
40-60	97	19.4
Over 60	31	6.2

* From Rowe and Killey's report of 500 fractures.[3]

MacLennan, reporting on a series of fractures in mandibles of children under six years of age (Table 3), has said, "In the condylar region the fractures are commonly of the 'greenstick' variety. These are of the 'low' type and do not, as a rule, give rise to any disturbances of mandibular development at a later date. Fractures of the 'high' type, on the other hand, are often associated with dislocation. The fracture dislocation of the condylar process in the young child must always be viewed with concern because of the likelihood of secondary

growth anomalies from damage to the condylar growth center."[4]

TABLE 3

FREQUENCIES OF MANDIBLE FRACTURE AT VARIOUS SITES IN PATIENTS UNDER SIX YEARS OF AGE*

1. Unilateral through body of mandible
2. Unilateral of body with condylar process on opposite side
3. Unilateral condyle
4. Bilateral condyles with or without fracture in incisor region
5. Bilateral body fractures.

*From MacLennan's study in 1952.[4]

CLINICAL AND RADIOGRAPHIC EXAMINATION

Basic Principles in the Early Treatment of Fractures

1. Control hemorrhage.
2. Be aware of patient's respirations, pulse and blood pressure.
3. Keep in mind the need for antibiotics and tetanus antitoxin.
4. Secure clearance for cranial injuries.
5. Be alert to legal responsibilities and liabilities.
6. Always treat the patient first and the fracture second.

Major Objectives in Fracture Treatment

1. To reestablish functional occlusion and inter-arch relations.
2. To preserve and protect the dentitions.
3. To secure reduction and fixation as soon as surgical judgment will permit.
4. To keep surgical trauma at a minimum.
5. To keep the esthetics, general welfare and comfort of the patient in mind.

Whether or not the clinical and radiographic examinations of children with traumatic injuries can be satisfactorily completed preoperatively usually depends upon the age of the child and his or her willingness and ability to cooperate. The final examination of the extent of the injury, in any event, can be delayed until a general anesthetic has been administered for the actual reduction and fixation procedure.

Good diagnostic x-rays are extremely important in the study and evaluation of any fracture. However clinical interpretation at the time of surgery still is the most significant way of understanding the nature of the fracture. Head films, especially of the middle third of the face, may be indistinct and misleading, and bony crypts around erupting teeth may make a linear fracture line with little or no displacement extremely difficult to diagnose even on intraoral films. Whenever possible, minimal x-ray coverage of any jaw-fracture problem should include extraoral, PA and lateral views, and intraoral periapical and occlusal views.

There should be as extensive a preoperative examination as the patient's general condition will permit, relative to his head injury. It is poor clinical judgment to proceed with the reduction and immobilization of a jaw fracture in the face of unexplained findings such as loss of consciousness, vomiting, headaches, dizziness, diplopia, uneven pupils, partial or complete paralysis, hemorrhage from an ear, loss of spinal fluid, irregular respirations, or abnormal pulse rate and blood pressure findings. To do so might be an open invitation to subsequent legal action in the event of a questionable end result or a fatality.

Diagnostic Findings of Clinical Significance

1. Malocclusion of teeth and jaws.
2. Mobility at the site of a suspected fracture.
3. Disability or dysfunction of the jaw.
4. Crepitation during digital examination.
5. Swelling.
6. Ecchymosis.
7. Pain.

DETERMINING THE SURGICAL PROCEDURE OF CHOICE

As a general rule it is desirable to keep the surgical procedures as uncomplicated as possible. It should be kept in mind that young children, especially, are unlikely to tolerate extensive fixation equipment.

The Fracture-Treatment Procedure Is Dependent Upon

1. The age and cooperativeness of the patient.
2. The dentition present.
 a. Deciduous teeth (Note extent of root resorption).
 b. Mixed dentitions.
 c. Permanent dentition (Note extent of root development).
 d. Edentulous areas.
 e. Tooth in line of fracture.
 f. Fractured tooth (with or without pulp involvement).

3. Extent of alveolar and bone injury.
 a. Single or multiple fractures.
 b. Simple, compound or comminuted fractures.
 c. Loss of bone substance.
4. Control of bone fragments by:
 a. Closed vs. open reductions.
 b. Skeletal fixation procedures:
 (1) Bi-phase pin procedure.
 (2) Frictional pin procedure.
 (3) Circumferential wiring (splints or dentures).
 (4) Intraosseous pins.
 (5) Bone plates.
 c. Cranio-facial technics. (In this connection it is my firm opinion that we should not lose our perspectives and discard some of our proven procedures for extensive open reductions.)

BONE PATHOLOGY AND REPAIR IN FRACTURES

The process of bone repair in the jaws is the same as in other bones. It is primarily a local phenomenon and not a systemic one. It is dependent on the local tissue changes in the fracture area and is not vitally concerned with blood calcium or phosphorus levels or other systemic metabolic processes. The phases of bone repair have been enumerated by various authors. One simple yet useful classification of these healing phases is shown in Table 4.

TABLE 4

PHASES OF REPAIR IN A HEALING FRACTURE

1. Hematoma phase (24 to 72 hours after injury).
2. Fibrous repair phase (through the first three weeks).
3. Final bone-forming phase (the fourth through the sixth week). This is the danger period! Interference by manipulation or undue stress can result in non-union or malunion.

At the time of fracture there is the coincidental laceration and contusion of the surrounding tissues. If the fracture is compounded intra- or extra-orally, the problem may be complicated by the outside contamination. If the fractured fragments are displaced, the possibility of vascular impairment to the local fracture site must be considered and may influence the rate of healing.

SUMMARY STATEMENTS

It is understandable and commendable that more and more difficult fractured jaws and associated structures are being managed by direct open reductions. The use of antibiotics to combat infections, improved general anesthetic agents and technics of administering them, and more intensive and improved graduate training programs in oral surgery all contribute toward making such procedures safe and practical for both the patient and the operator. However some of the routine and practical methods of using extra-oral traction to control some types of fractures and to accomplish closed reduction should not be forgotten.

In attempting to evaluate some of the varying professional opinions regarding the management of jaw fractures, one discovers that open approaches to the management of such fractures—in some instances extensive ones—are advocated. *First*, the diagnosis and surgical management of such cases should be the responsibility of someone who understands the growth and development of the jaws, and the mixed and developing dentitions, together with their related structures. *Second*, it may not be defensible to strip periosteum grossly from small bone fragments to permit extensive open reductions, especially in comminuted fractures of some thin membranous bones. If satisfactory repositioning and alignment of fragments can be attained by closed reduction, the vascularity to these areas should be improved and the possibility of introducing infection and additional surgical trauma would be minimized. *Third*—and perhaps this is the most important factor to consider—is the reestablishment of functional occlusion and satisfactory inter-arch relations. The oral surgeon, with his dental background, should be the most adequately prepared individual to diagnose and treat such traumatic injuries of the jaws. However it is recognized that patients with complicated facial injuries may also require medical consultation and care. In most of the dental and medical teaching centers where interprofessional teamwork is practiced, the management of such accident cases has taken on a reasonably routine aspect that promotes improved patient care and better interprofessional respect and working relations.

It is generally recognized that in no other field is legal action more frequently taken than in the treatment of fractures. Fractures of the mandible and maxilla are no exception to this rule, and pediatric jaw fractures are complex

and complicated diagnostic and treatment problems.

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Drug Therapy in the Management of Gastrointestinal Complaints

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THE CONTROL OR REDUCTION of hypermotility and hypersecretion can substantially mitigate painful symptoms for many patients with gastrointestinal disorders. Consequently, the treatment of such patients often includes the administration of belladonna alkaloids or related compounds for their antispasmodic and antisecretory effects.

For patients who complain of abdominal discomfort, epigastric pain, dyspepsia and similar gastrointestinal symptoms, our procedure is first to determine the possibility of serious organic disease. Where organic pathology is suggested by the medical history, by the physical examination or something else, an x-ray examination is performed as soon as possible, and depending on its results, treatment may be initiated. It may consist of dietary adjustments, drug administration or, in more serious cases, surgery. For patients in whom the gastrointestinal problem appears to be functional rather than organic, antispasmodic/sedative drug therapy is instituted as a matter of routine.

MATERIAL AND METHOD

For this study, we reviewed the records of 49 patients (16 males and 33 females) whom we had treated. Following initial interviews and examinations, functional gastrointestinal disorders had been diagnosed in 35 patients; the diagnoses in the remaining 14 were gastric or duodenal ulcers (either suspected or confirmed by x-ray examination). The average age of these patients was 40.4 years, and the age range was from 12 to 81 years (Table 1). The patients' primary complaints were epigastric pain and generalized abdominal pain or distress. Less prevalent complaints included nausea, anorexia, diarrhea, constipation, chest pain, esophageal pain and flatulence.

Our experience in treating such patients has led us often to use a sustained-release preparation containing phenobarbital and levorotatory alkaloids of belladonna—Belladenal Spacetabs.* Consequently, for relief of their primary symptoms these 49 patients were given that preparation for varying periods of time. However each patient received two Spacetabs per day for at least four weeks, during which time he was seen by the physician either once or twice.

For purposes of this study, the change in incidence and severity of symptoms (determined from data recorded during interviews held prior to treatment and four weeks later) was used as the chief determinant of each patient's response to treatment. For a judgment of "all or none" effect, the presence of individual symptoms before and after therapy was noted. Global evaluations of patients' conditions were also made. The classifications "mild," "moder-

* Sandoz Pharmaceuticals.

TABLE 1

PATIENT CHARACTERISTICS

Diagnosis	Number and Sex of Patients	Age of Patients* (Years)	Presenting Symptoms
Gastritis	20 females 5 males	16-79 (average: 39.3)	Epigastric pain Nausea Anorexia Generalized abdominal distress
Ulcer (suspected or proved)	5 females 9 males	12-56 (average: 33.9)	Epigastric pain Nausea Flatulence Anorexia Abdominal pain
Enteritis	2 females	78-81	Generalized abdominal distress
Colitis	2 females	33-39	General or lower abdominal distress Diarrhea Constipation
Nonspecific	4 females 2 males	20-75	Epigastric pain Generalized abdominal distress Diarrhea Esophageal pain
Total	49 patients	12-81 (average: 40.4)	

* Ages of five patients were unknown.

ate," "severe" or "very severe" represented composites of severity and incidence of symptomatology for each patient. The extent of change in these evaluations indicated the patient's overall response—"good," "fair" or "poor."

RESULTS

As shown in Table 2, "good" or "fair" results were achieved by a majority of the patients. Thirty-four patients (69 per cent) showed "good" responses, representing a notable degree of symptom relief; 9 patients (19 per cent) showed "fair" responses, or partial symptom relief. "Poor" responses, or no observable change, were experienced by 6 patients (12 per cent).

These global results suggest that primary symptoms were substantially alleviated after four weeks of treatment. On the basis of an "all or none" effect, remission of epigastric pain

TABLE 2

GLOBAL ESTIMATES OF ILLNESS AND RESPONSES TO TREATMENT

Overall Severity Before Treatment	No. of Patients	Response to Treatment Good	Fair	Poor
"Very Severe"	20	14	3	3
"Severe"	22	14	5	3
"Moderate"	7	6	1	0
Total	49	34	9	6

TABLE 3

REMISSION OF INDIVIDUAL SYMPTOMS

Symptom	Number of Complaints Before Treatment	After Treatment
Epigastric pain	36	4
Abdominal pain or generalized distress	14	10
Nausea	7	3
Anorexia	6	4
Diarrhea	2	0
Constipation	2	1
Chest pain	1	0
Esophageal pain	1	0
Flatulence	1	1
Total	70	23

was best (Table 3), for the incidence of that symptom dropped from 36 before to 4 after treatment. The number of complaints of abdominal pain or distress was also reduced (from 14 to 10), although that reduction was not so dramatic as that for epigastric pain. Other less prevalent symptoms such as anorexia, nausea and diarrhea also appeared to remit to a considerable degree, but their incidences were too small for meaningful pre- and post-treatment comparisons.

DISCUSSION

As this study has shown, many patients with gastrointestinal disorders of functional or organic origin can obtain effective relief of symptoms such as epigastric pain and abdominal pain or distress through treatment with Belladenal Spacetabs. Our findings are in agreement with those reported by other investigators.[1-3] Particularly relevant to our experience is the controlled double-blind study conducted by Lichstein and Da Costa Mayer,[1] in which Belladenal Spacetabs and placebos were compared for therapeutic effect in patients with "irritable colon," a functional disturbance. In that evaluation, 75.6 per cent of patients treated with the active agent showed symptomatic improvement; in contrast, improvement was obtained in 29.8 per cent of patients treated with placebos alone. Belladenal was found to have been especially effective in alleviating the patients' predominant complaints of generalized abdominal distress and epigastric pain—symptoms which also prevailed in our study, and showed best response to treatment with this agent.

It should be recalled that a prolonged and unrelieved functional disorder may contribute to the development of organic pathology. In many patients the so-called "nervous stomach syndrome" for example, if not relieved, can lead eventually to ulceration. Consequently, the alleviation of both physical complaints and emotional distress is the prime objective of treatment in these patients. Besides giving relief, in some cases it may prevent organic problems from arising.

Added benefit has been observed in older patients with colonic discomfort but no demonstrable lesions. The majority of elderly patients with functional colonic symptoms have obtained satisfactory relief with Belladenal Spacetabs.

We also have been most impressed by the effects of Belladenal in patients with suspected or proved organic pathology. Individuals in whom ulcers have been confirmed by x-ray, for example, have been maintained comfortably and sometimes symptom-free for long periods while on this drug. Its antispasmodic-anticholinergic action seems to curb the severity of their symptoms. When given early to "pre-ulcer" patients, it appears to have retarded or wholly prevented the development of a full-blown ulcer condition.

Patient acceptance and tolerance of Belladenal Spacetabs have been uniformly high. We have observed no significant side effects of the medication. The dosage regimen of two tablets per day has provided an extended therapeutic effect, and has been simple for patients to follow.

SUMMARY

Patients with functional gastrointestinal disorders or ulcers showed substantial symptomatic improvement after four weeks of treatment with Belladenal Spacetabs (two per day). "Good" responses were achieved by 69 per cent of the patients; "fair" by 19 per cent; and "poor" by 12 per cent. Overall improvements in the patients were associated with alleviation or remission of their primary symptoms, epigastric pain and generalized abdominal pain or distress. Other less prevalent complaints such as anorexia, nausea, diarrhea and flatulence also seemed relieved in some measure as a result of treatment.

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Correlation Between Fluorescent Treponemal Antibody Absorption (FTA-ABS) Results and the Physicians' Diagnoses

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The fluorescent treponemal antibody absorption (FTA-ABS) test is the latest and most accurate serologic tool for the diagnosis of syphilis. Attention must be called to the imperfect correlation between results of the new test and physicians' diagnoses. Of the FTA-ABS reactive patients in this Iowa study, 5.8 per cent were diagnosed as "not infected." Conversely, 7.8 per cent of the FTA-ABS non-reactive patients were diagnosed as having syphilis in one stage or another.

An editorial on this subject appears on page 1241 of this issue.

Such tests for syphilis as the VDRL, RPCF, TPCF and TPI utilize antigens which vary greatly in specificity. Although they were conceived in attempts to clarify the existence of a disease state, they have served only to confuse the attending physician in a number of instances.

The development of the fluorescent treponemal antibody absorption (FTA-ABS) test[1] has been the result of continued attempts to improve the sensitivity and specificity of the original FTA procedures.[2, 3] The Treponema pallidum immobilization (TPI) test has generally served as a standard of reference in evaluations of serologic tests for syphilis. Comparison of the Reiter protein complement fixation (RPCF) test, TPI, FTA-200 and FTA-ABS results have indicated that the FTA-ABS is considerably more sensitive than either the RPCF or the FTA-200. Furthermore, the FTA-ABS and the TPI have similar levels of sensitivity and specificity.[4, 8] In other studies the FTA-ABS was more sensitive than the TPI in all stages of syphilis.[5] Differences between TPI and FTA-ABS results were due primarily to the greater sensitivity of the FTA-ABS in very early syphilis and in syphilis of long duration.[6]

The "biologic" false-positive (BFP) serореaction has always been a problem in the diagnosis of syphilis. The BFP refers to a positive reaction in one of the screening tests such as the Kolmer, Kline or VDRL. Those tests employ a cardiolipin antigen to detect a ubiquitous serum protein called reagin that is found in the sera of patients experiencing any of a myriad of maladies, one of which is syphilis.

A number of individuals thought to have false-positive reactions on the basis of a single nonreactive TPI were reactive to FTA-ABS tests. When the TPI was repeated, only 12 out of 50 were positive. Moreover, in seven patients with negative reactions to the serologic test there was definite clinical evidence of late syphilis. Thus the original diagnoses, based on a single TPI in each instance, were wrong in at least 19 out of the 50 patients. No definite decision was reached on the remaining 31 patients. However studies of the natural history of syphilis have shown that almost 70 per cent of infected individuals remain unaffected by their disease, and latent

The authors are members of the staff of the Serology Section of the State Hygienic Laboratory.

manifestations do not develop. Therefore, anywhere from one to 31 of those remaining patients may actually have had syphilis.[7]

The consensus of the aforementioned studies easily justifies use of the FTA-ABS procedure, rather than the more costly and time-consuming TPI, as a confirmatory test for the diagnosis of syphilis. Although there was definite agreement between the TPI and the FTA-ABS results, the latter procedure correlated better with the clinical diagnoses.[9, 10] Because the sociologic implications of syphilis demand complete accuracy in diagnosis, we feel that the advent of the FTA-ABS will help the physician attain that goal by supplying him with the latest, most accurate serodiagnostic tool.

Since January, 1966, the State Hygienic Laboratory has employed the VDRL as the screening test and the FTA-ABS as the confirmatory serodiagnostic test for syphilis. This study was designed to correlate the results of the VDRL and the FTA-ABS tests with the final clinical diagnoses. It was designed not to criticize but rather to evaluate and educate.

MATERIALS AND METHODS

The 2,636 sera tested had been received from physicians throughout Iowa and also from the 72 laboratories approved to do the VDRL slide test for premarital and prenatal syphilis. Quantitative and qualitative VDRL slide flocculation tests for syphilis were performed according to standard methods.[12] The FTA-ABS test was performed as described by Hunter *et al.*[1, 13] Commercially available reagents were utilized in both tests. Fluorescent microscopy was performed with a Leitz SM microscope equipped with an HBO-200 burner and a filter system consisting of a BG-12 exciting filter and an OG-1 barrier filter. Light output was measured by a Gossen foot-candle meter. Intensity of fluorescence was recorded on the basis of 1 + to 4 + subjective readings. Reactions below 1 + were recorded as non-reactive for the purposes of this study.

The data obtained for this study represented only those sera on which both the VDRL and the FTA-ABS tests were performed during a period of seven months.

If either the VDRL or the FTA-ABS results indicated a "weak reactor" or a "reactor," a copy of the data slip was sent to the Iowa State Department of Health, which in turn obtained information from the attending physician on the final disposition of the case. All available data were punched on Keysort cards and analyzed.

RESULTS

The VDRL and the FTA-ABS tests were performed on 2,636 sera submitted to our laboratory from the sources previously described. Fifty-eight per cent of those sera were FTA-ABS reactive. Our laboratory performed the FTA-ABS test on VDRL-negative sera only under special circumstances. The patients were either diagnostic problems or contacts of active syphilitics. Therefore the FTA-ABS was an invaluable tool in confirming that the patient had, or had had, syphilis.

The laboratory results were then compared with the physicians' final clinical diagnoses (Table 1). It is apparent that the laboratory results were not always compatible with the final diagnoses. When the FTA-ABS was reactive, indicating that the patient either had or had had syphilis, 5.8 per cent were reported by the physicians as "not infected." At this point, attention should be called to the fact that there seems to be some disagreement about the meaning of the term "not infected." To the Iowa State Health Department it means that the patient *does not have and never has had syphilis.* It seems, however, that to the physician it may mean any of the following:

1. The patient does not have and never has had syphilis.
2. The patient has had adequate treatment for syphilis in the past.
3. The patient is not in an infectious stage of syphilis.
4. The patient has no clinical history or symptoms of syphilis.
5. The personal history of the patient is judged more reliable than the laboratory results, as evidenced by such statements as, "I've known this patient for a long time, and I know that he (or she) doesn't have syphilis," or "She is a happily married woman with children who have no evidence of syphilis."
6. The laboratory result must be a BFP because diseases or conditions other than syphilis have been documented as producing false-positive VDRL's or other false-positive results in standard tests for syphilis (STS).

Presently, except for the two-non-venereal treponematoses, yaws and pinta, there are *no* known diseases, conditions or maladies that will yield a false-positive FTA-ABS. Neither of them normally occurs in Iowa, although like many of the other exotic diseases they have been detected in transients, students or "world travelers." Therefore interpreting an FTA-ABS positive result as a BFP in a patient who has not been exposed to yaws or pinta is inconsistent with current thinking.

Conversely, 7.8 per cent of the individuals having non-reactive FTA-ABS tests were diagnosed by physicians as having syphilis in one stage or another. Almost half of these were reported by this Laboratory as probable biologic false positives (BFP's). The following procedure was employed whenever a BFP reaction was suspected in a serum that was VDRL-reactive at a 1:4 or greater titer, and yet was consistently FTA-ABS negative. The patient's serum was diluted 1:5 in saline, and also in sorbent (the water-soluble extract from Reiter treponemes). The sorbent absorbs out any non-specific antibodies such as might be produced by saprophytic treponemes. If the serum was FTA-reactive in saline, but FTA non-reactive in sorbent, then we reported that the positive VDRL reaction had probably been due to something other than syphilis. These results apparently were not accepted, for the previous diagnoses remained unchanged.

The remaining half of the patients who were diagnosed as having syphilis despite the fact that their FTA-ABS tests had been non-reactive, there is no way of explaining. With the exception of four patients who had been contacts of known syphilitics and who had been treated epidemiologically before any serologic response could occur, the diagnoses must have been based on previous non-specific treponemal tests such as the VDRL, Kolmer and RPCF. The FTA-ABS results were therefore either ignored or misinterpreted.

Another striking feature of Table 1 is the enormous number of patients diagnosed as having "late latent" syphilis. Their age distribution is given in Table 2. Only 9.8 per cent of them were under 40 years of age, and 83.2 per cent were 41 years of age or older. All of the reported ages were taken at the time the VDRL and FTA-ABS tests were performed. In 7 per cent of the cases, the patients' ages were unknown. Are there really so many people in the "late latent" stages of syphilis, or were they thus categorized simply because of their ages? How many of those patients had received adequate treatment previously, and how many had never been infected at all?

In an attempt to explain the number of patients who were diagnosed as having syphilis and yet were non-reactive to FTA-ABS, a comparison was made between the serologic test results and the treatment. One hundred two patients were treated for syphilis though their FTA-ABS tests were non-reactive. These re-

TABLE 1

COMPARISON OF 2,636 VDRL AND FTA-ABS TEST RESULTS WITH THE DIAGNOSED STAGE OF SYPHILIS

Stage of Syphilis Diagnosed by Physicians	VDRL (R) FTA-ABS (R)		VDRL (NR) FTA-ABS (R)		VDRL (R) FTA-ABS (NR)		VDRL (NR) FTA-ABS (NR)		TOTAL	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Primary	10	(0.7)	4	(2.6)	2	(0.3)	0		16	(0.6)
Secondary	39	(2.8)	5	(3.3)	1	(0.2)	0		45	(1.7)
Early latent	58	(4.2)	8	(5.3)	3	(0.4)	0		69	(2.6)
Latent	1,066	(77.4)	90	(59.6)	65	(9.6)	11	(2.6)	1,232	(46.7)
Congenital	76	(5.5)	8	(5.3)	3	(0.4)	1	(0.2)	88	(3.4)
Not infected	67	(4.9)	22	(14.6)	544	(80.5)	413	(95.8)	1,046	(39.7)
Others*	62	(4.5)	14	(9.3)	58	(8.6)	6	(1.4)	140	(5.3)
Total	1,378	(100.0)	151	(100.0)	676	(100.0)	431	(100.0)	2,636	(100.0)

* Contact diagnosis, unspecified diagnosis, or no final disposition obtained.

sults could be explained if the patient was treated epidemiologically because he or she was a contact of an active syphilitic. In that case it is quite possible that neither the VDRL nor the FTA-ABS would ever be positive. However since the reactivity of the FTA-ABS and the VDRL appear at approximately the same time after infection, it is not likely that the syphilitic would have a reactive VDRL and a negative FTA-ABS. Therefore any laboratory basis for treatment in those cases must have been either the positive VDRL reaction or some other previously reactive standard serologic tests (STS).

The comparison also showed that of the 1,529 patients with reactive FTA-ABS tests, 5.8 per cent were reported "not infected," and that 7.8 per cent of the 1,107 patients with nonreactive FTA-ABS tests were reported as having syphilis in one stage or another. Although we must allow for some disagreements between the Laboratory and the physician, should we accept disagreements in 13.6 per cent of the cases? Since the reliability of the FTA-ABS as a serodiagnostic tool for syphilis has been well documented, we must assume that the physician has been inadequately informed about the FTA-ABS test and its interpretation.

DISCUSSION

When Treponema pallidum or similar treponemes invade a human host there are two types of antibody response: (1) reagin antibodies resulting from non-treponemal antigens, and (2) antibodies to the treponeme itself. The former, the reagin antibodies, are measured by antigens obtained from tissue extract, such as the cardiolipin-cholesterol-lecithin extract which is used in the VDRL slide test. This nontreponemal test is not specific for syphilis, but because of its sensitivity it is a valid screening test to rule out non-reactives. The latter, antibodies to the treponeme, react with antigens obtained from specific treponemes. The fluorescent treponemal antibody-absorption (FTA-ABS) test demonstrates syphilitic antibody by visualizing its adherence to dead T. pallidum. In this test the patient's serum is diluted 1:5 in FTA-ABS test sorbent (a standardized extract of the nonpathogenic Reiter-treponeme-containing group of treponemal antigens). The serum-sorbent mixture is then allowed to react with T. pallidum cells which have been fixed on a slide. Fluorescein-tagged antihuman globulin is then added to the system. If the serum contains antibodies against T. pallidum, they will combine with the fixed treponemes, and subsequently with the tagged antihuman globulin. Under ultraviolet microscopy the spirochetes will exhibit fluorescence if specific T. pallidum antibodies are present in the serum. That is a positive test. Therefore, a positive FTA-ABS means that the patient *has* antibodies against T. pallidum, and thus that the patient either *has* or *has had* syphilis. If specific syphilis antibodies are not present, fluorescence is not observed and the results are negative. It is postulated that the antibodies detected by the FTA-ABS test appear at approximately the same time as the reagin detected by the VDRL, and that for this reason the test is extremely sensitive. It is also believed that the specificity of this test equals

TABLE 2

AGE DISTRIBUTION OF CASES DIAGNOSED AS LATE-LATENT SYPHILIS

Age in Years	VDRL (R) FTA-ABS (R) Cases	%	VDRL (NR) FTA-ABS (R) Cases	%	VDRL (R) FTA-ABS (NR) Cases	%	VDRL (NR) FTA-ABS (NR) Cases	%
Less than 21	4	(4.1)	1	(1.1)	0		0	
21-40	85	(8.6)	9	(9.1)	11	(18.3)	2	(18.2)
41-60	400	(40.5)	53	(54.1)	34	(40.0)	5	(45.5)
Over 61	427	(43.5)	30	(30.6)	23	(38.4)	3	(27.3)
Unknown	72	(7.3)	5	(5.1)	2	(3.3)	1	(9.0)
Total	988	(100.0)	98	(100.0)	60	(100.0)	11	(100.0)

that obtainable by the TPI procedure.[14, 15]

The results of this study have shown that 5.8 per cent of the FTA-ABS reactive patients were diagnosed as "not infected" by their physicians. There has been some confusion about terminology, however. In reporting a patient "not infected," a physician may actually have meant "not infectious." The Iowa State Department of Health has revised the report forms in order to remedy this difficulty. Conversely, however, 7.8 per cent of the patients whose sera were FTA-ABS negative were diagnosed as having syphilis in one stage or another.

Although the specific stages of syphilis are not always clearly discernible as the disease progresses, it seems inconceivable that 75.6 per cent of those patients diagnosed as having syphilis could actually have had the late-latent type. By definition, latent syphilis is hidden syphilis. Early latent syphilis may be presumed if a history can be obtained showing probable primary or secondary lesions to have been present within the previous two to four years. In the absence of other signs and symptoms, a reactive serology accompanied by a non-reactive spinal fluid examination must be considered diagnostic of latent syphilis until another cause of the sero-reaction is discovered. In the past, most authorities defined "early latent syphilis" as syphilis of less than four years' duration, and "late latent syphilis" as syphilis of more than four years' duration. From our study it appears that if a patient is over 40 years of age and has syphilis, he or she is almost automatically classified as having the "late latent" type. Apparently, little consideration is given to the possibility of early latent, secondary or even primary syphilis in such patients. To paraphrase, life begins at 40, but sexual contacts must end at 39!

Finally, the VDRL and FTA-ABS test results were correlated with stages of treatment. There were 1,107 patients with negative FTA-ABS tests, which in most instances indicate that the patients do not have, and never have had, syphilis. Of those people, 4.6 per cent had either weakly reactive or reactive VDRL test results and were treated. Three per cent were either under treatment prior to investigation, or were said to have had adequate treatment previously. It could be argued that the majority of those people probably never had had syphilis, since their FTA-ABS tests were uniformly non-reactive.

It should be emphasized that on the whole there is good correlation between the serologic tests performed in the laboratory and the final clinical diagnosis. We fully realize and recommend that the physician should not rely for his diagnosis on laboratory tests alone. However it appears that physicians have not been adequately informed on the interpretation of the latest serodiagnostic tests for syphilis. There may be the "overcautious" physician who will say that a patient with any positive test for syphilis is a syphilitic and therefore needs treatment. There also may be the conservative physician who is hesitant to make a diagnosis of syphilis regardless of repeated positive test results because of the socio-moral implications of the disease. They are, to be sure, the extremes. The problem of the positive serologic test for syphilis in a patient without history or clinical evidence of the disease has been aggravated by the fact that many people are treated with antibiotics which have antisyphilitic effects, though they are not administered for that purpose. However, Winder L. Porter has aptly summarized the approach that the physician must take in interpreting reactive serologic tests for syphilis. He says, "The vast majority of reactive serologic tests for syphilis can be satisfactorily interpreted if history-taking, physical examination, epidemiological investigation and specific treponemal serologic tests are combined in an orderly manner."[16]

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Pityriasis Rosea in Pregnancy: A Case Report

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MRS. J. J. CAME TO MY OFFICE on October 24, 1966. Her last period had commenced on August 21, 1966. At the time of that first visit she was a gravida 2, para 1, age 24, and she was noted to have the typical rash of pityriasis rosea, with the Hearold patch on the thorax and numerous oval, pink macules scattered over her body. She was blood type O, Rh negative, and her serology was negative. The only medications which she took during her pregnancy were Bonadoxin and Engran. Her first pregnancy, two years prior to this conception, had been normal throughout.

The patient had been pregnant for approximately six weeks at the onset of the pityriasis rosea. She did have a prescription for Modane, full strength, for constipation. The rash disappeared on November 15, 1966. A weight gain of 11 pounds was noted between January 7, and March 4, 1967. On April 1, 1967, a polyhydramnious was noted, and on April 5, 1967, she had a premature onset of labor and gave birth to a stillborn female infant. The autopsy report indicated a single fetus with generalized body deformities.

AUTOPSY FINDINGS

External Body Examination: The body was that of a newborn white female infant, with the external appearance of a dwarf—a short, stout neck and short extremities. Her measurements were 16½ in. from crown to heel, and 12 in. from crown to rump. The circumference of her head, thorax and abdomen were 13, 10 and 11 in., respectively. Her total body weight was 2,325 Gm. Rigor mortis was absent, and postmortem lividity was confined to the neck and the back of the head.

The head was normocephalic, and the scalp was covered with short, brownish-black hair. No evidence of caput or cephalohematoma, or of any other birth trauma was seen. Both eyeballs were symmetrical, and the sclera were not icteric. The pupils were rounded and even, each measuring 3 mm. in diameter. The pinna of the ears were rather small. The external ear canals, nose and oral cavity were grossly normal. The lips and nailbeds were markedly cyanotic. The neck was short, thick and stout, but showed no palpable masses. The chest was symmetrical, and the abdomen was somewhat distended. The umbilical stump was tightly clamped, and had partially dried. The external genitalia were those of an infant female. Both upper and lower extremities were abnormally short, and the hands and fingers were held in midflexion position. The back was unremarkable. The skin and mucous membrane showed no evidence of icterus.

REVIEW OF THE LITERATURE

There really has been very little written regarding a relationship between pityriasis rosea and pregnancy. In 1957, Salin noted two such

patients in their third trimester of pregnancy.[1] Pityriasis rosea was noted, but the women were subsequently delivered of healthy children. In 1955, Zeligman had presented the case of a 22-year-old gravida 2, in the fifth month of her third pregnancy, who exhibited lesions of pityriasis rosea for several weeks and was treated with hydrocortisone.[2] No mention was made of the condition of the infant, however. Corson, describing the incidence of pityriasis rosea, said in 1950: "In women of child-bearing age, we have had a high incidence of pityriasis rosea among those who were pregnant."[3]

Because pityriasis rosea is more often found in young people than in the middle-aged or elderly, it should not be surprising to find pregnancy associated with it in a considerable number of instances. However, I am reporting my case because there have been few similar ones presented in detail, and because none of those few have raised the possibility of teratogenesis. I am not attempting to draw any conclusions from this case, and I present it only as a phenomenon that may be of some interest.

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NIMH SPONSORS PSYCHIATRIC TRAINING COURSES FOR GP's

A mental health expert has called for general practitioners to be alert for an emotional basis for some illnesses. Noting that one survey has shown the complaints of one in seven adults who visit general practitioners have psychosomatic overtones, Dr. Stanley F. Yolles, director of the National Institute of Mental Health, said: "The complaints, a clear indication of emotional problems, include worry over the heart and circulatory system and complaints involving the digestive system. Such complaints can be forerunners of more serious mental illness."

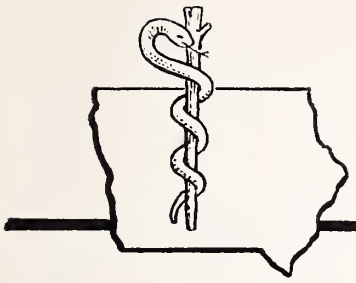
"It is axiomatic," he said, "that early case-finding is crucial to the successful treatment of most mental illnesses, and in many cases it is the family doctor who is in the best position to make an early diagnosis and to forestall the development of a more serious mental illness. This is especially true with alcoholics, drug abusers and potential suicides. Sixty-five per cent of all persons who commit suicide have seen a physician within four months of their deaths. And an unexplained tremor, persistent facial redness or unusual behavior or dress can tip off the family doctor that a long-time patient has a drinking problem."

A 1966 NIMH-supported study showed that on their own, doctors attempt to manage most psychiatric patients whom they see in their practices. The 6,000 physicians polled in the study reported referring only about 17 per cent of such patients to psychiatrists. The doctors prescribed psychotropic drugs for 75 per cent of their psychiatric patients.

Dr. Yolles said that because GP's usually don't receive extensive psychiatric training in medical school, the NIMH supports training programs designed to help physicians better detect emotional troubles and manage mental patients. Since 1959, the NIMH has supported programs which have provided more than 11,000 non-psychiatric physicians with psychiatric postgraduate education.

One of the most successful of these continuing education programs is in Ohio. Last year nearly 100 Ohio general practitioners received training to make them more aware of the psychological aspects of illness and more attuned to signs of emotional disturbance. These physicians are now better equipped to treat patients whom they felt they could not manage adequately before and they are making better use of community psychiatric facilities for cases needing specialized care. The program's goal over the next few years is to bring psychiatric training to 10 per cent of the Ohio physicians.

Another successful program cited by Dr. Yolles is in an Appalachian region of North Carolina. There, 64 of 68 non-psychiatric physicians in a five-county area are enrolled in an NIMH-supported continuing education program designed to enable the physicians to treat mental patients in their offices. Since the program began, admissions to the state hospital from the five-county area have dropped 25 per cent, while admissions from other counties served by the same state hospital have more than doubled.



Editorials

MERRY CHRISTMAS!

It is again the pleasure of the office staff of the Iowa Medical Society and of the JOURNAL to wish you and yours a Merry and a Blessed Christmas.

May the true significance of the season and the joy of giving enfold you and bring you tranquility of spirit.

It is fitting that everyone fervently pray for Peace on Earth and Good Will Towards Men, and that men and nations make a strenuous effort to attain these goals.

A NEW AND DEFINITIVE TEST FOR SYPHILIS

There was an old adage to the effect that if one knew syphilis, one knew medicine. This was prompted by the fact that no anatomical structure of the body was immune to involvement by Treponema pallidum, once the human organism was infected.

With the advent of penicillin therapy the clinical and serologic response of the early lesions of syphilis has been rapid and satisfactory. In fact penicillin administered in adequate doses during the primary and secondary stages of the disease appears effectively to prevent the development of late lesions—this despite the known fact that the seeds of potential late syphilis are sown early in the disease as treponemes rapidly spread throughout the body. Treponema pallida have been found even in the cerebrospinal fluid in the primary seronegative stage of the disease.

Though syphilis has continued to be a public health problem—an increasing one of late—the real problem has been detecting patients in the primary and secondary stages of the disease, and making certain that they receive adequate treatment. With prompt and adequate treatment with penicillin, it is felt that a clinical cure can be assured.

A recent leading article in THE LANCET entitled "Persistence of Treponemes After Treatment of Syphilis" concerns the response to penicillin therapy in late-latent and late-symptomatic syphilis.* This is a disconcerting review, and it is a reminder that one can expect almost anything in this disease.

According to the article, the response of late-latent and late-symptomatic syphilis to treatment with penicillin is much more difficult to judge than is the response in the primary and secondary stages of the disease. It is asserted that the serologic tests, especially the specific reactions, the treponema immobilization (TPI) and the fluorescent-antibody (FA) tests in which Treponema pallida are used as antigen, remain positive in almost all cases. This led to the suspicion that the continued positive tests might be due to a persistence of treponemes in the body.

The article goes on to say that there is experimental evidence in support of the persistence of treponemes in the body. In 1962 these organisms were demonstrated in the lymph nodes of rabbits which had been treated two years after infection with a laboratory strain of Treponema pallidum. The organisms were also found in the inguinal nodes of patients

* Persistence of treponemes after treatment of syphilis (Leading Article). LANCET, 2:718-719, (Sept. 28) 1968.

who had been treated for late syphilis—in one patient who had been given 150 megaunits of penicillin. In another study of 45 men who, in the past, had received adequate therapy for late-latent syphilis by accepted standards, five patients were found to have treponemes in their inguinal nodes, and in two instances the organisms were successfully transferred to rabbits. The five patients were retreated, and treponemes were again found in three of them and in six more of the original group. In still another study of treated late syphilis in the rabbit, 23 animals with infection of 14 to 22 months' duration were treated with benzathine penicillin. The inguinal nodes were removed and examined a year later, and treponemes were found in four of the 18 surviving animals.

Several workers have been able to demonstrate treponemes in cerebrospinal fluid and even in the aqueous humor. In one reported case, a patient with tabes had eye changes and enlargement of the liver and spleen. Serum tests for syphilis, including TPI and FTA-ABS were negative, and the spinal fluid showed merely an elevated protein level and a slightly abnormal colloidal gold test. Treponemes were found in the aqueous humor, the spinal fluid and in biopsy material from the patient's liver.

The article states that it now appears established beyond any reasonable doubt that Treponema pallidum may persist in some patients after the treatment of late infectious syphilis with amounts of penicillin that are considered adequate according to present practice. The organism has also been found in some untreated patients with clinical findings of late lesions but with normal serologic-test and cerebro-spinal-fluid findings. In these patients the presence of the organism has been demonstrated by fluorescent antibody technic. These persisting organisms have been found to produce infection in laboratory animals; however whether they may be causing trouble in the human host, or whether a stable host-parasite relationship has been established, is not known. In some patients who have been given steroids it is possible that the balance between organism and host has been disturbed.

It is emphasized that penicillin exerts its bactericidal effect only against rapidly growing organisms. Treponema pallidum grows slowly, with a generation time of about 30 hours. In early syphilis the rate of multiplication of the organism is at its maximum, but in the late stages of the disease it probably is not multiplying actively, and as a consequence penicillin may not be so effective.

Whether the recent observations will call for modifications in the treatment of syphilis remains an unanswered question, but they do indicate a need for further study. They confirm the long-recognized fact that syphilis still is a disease of surprises, and that it is a challenge to the physician.

Heaven forbid that we experience a return of wards filled with patients having paresis and tabes, gummata, luetic aortitis and aneurysms, or of Charcot joints!

Apropos the subject of syphilis, the reader is urged to study the article by Lindell and Koontz, of the Serology Section of the State Hygienic Laboratory, which starts on page 1234 in this issue of the JOURNAL. According to these authors their study was designed to correlate the results of the VDRL and the Fluorescent Treponema Antibody Absorption tests with the final clinical diagnoses. They specifically state: "We feel that the advent of the FTA-ABS will help the physician in the complete accuracy of diagnosis [of syphilis] by supplying him with the latest, most accurate serodiagnostic tool." They also state that the study "was designed not to criticize, but rather to evaluate and educate." It is hoped that their report will be accepted in the spirit in which it was written, and that it will not be offensive to the practicing physician, even though the authors imply infallibility of their laboratory test and an inexplicable fallibility on the part of the practicing physician.

Data accumulated during the seven-month study indicate that a total of 2,636 sera were examined. Both the VDRL and FTA-ABS tests were done on each serum. Of the sera tested, 1,529 (58 per cent) were FTA-ABS reactive. If either the VDRL or the FTA-ABS results indicated a "reactor" or a "weak reactor," a copy of the data was sent to the Iowa State Department of Health, which procured information from the patient's physician on the disposition of the case.

The study revealed that of 1,529 FTA-ABS reactors, 151 (5.8 per cent) were diagnosed by family physicians as "not infected," and that

these patients were not being treated. Conversely, in the group of 1,107 non-reactive patients, 7.8 per cent were diagnosed as having syphilis, and 102 of them were being treated for the disease.

The authors acknowledge that there is obvious confusion over the meaning of the term "not infected." To the Iowa State Department of Health it means that the patient does not have and never has had syphilis. To the physician it appears to have various meanings, probably the most common interpretation being that the patient is not infectious. Unquestionably physicians are influenced by the frequency of false-positive reactions in the past, when the older tests employing non-specific antigens were in use.

The Lindell and Koontz report takes issue with the high incidence of "late latent" syphilis indicated by physicians' diagnoses, and with the fact that only about 10 per cent of patients so diagnosed are under 40 years of age. The authors should consider that doctors are dealing with human beings and they they must rely upon the history and upon their observations of the patient. The doctor-patient relationship can never approach the accuracy of an end-point or a colorimetric reading in the laboratory. From their experience, physicians do not think of the laboratory as being infallible.

The authors offer some possible explanations for the fact that 102 patients who had been diagnosed as having syphilis were being treated despite the fact that they were sero-negative. Perhaps some of these were being treated epidemiologically because of contact with an active syphilitic, and neither the FTA-ABS nor the VDRL test had become positive. It is improbable that the patient would be VDRL-positive and FTA-ABS negative, for both appear at about the same time after infection. Any laboratory basis for treating these patients must have been a positive VDRL reaction or some other previously positive serologic test.

The authors emphasize that the reliability of the FTA-ABS test for syphilis is well documented. The findings in their study that 5.8 per cent of reactors were reported as "non-infected" and that 7.8 per cent of the non-reactors were reported as having syphilis led to the assumption that the physician has been inadequately informed about the FTA-ABS test and its interpretation.

There is one statement in their article which casts a slight doubt upon the complete reliability of the FTA-ABS test: "There were 1,107 patients with negative FTA-ABS tests, which in most instances indicate that the patients do not have, and never have had, syphilis." Some documentation regarding *the exceptions* which that sentence allows for would be of interest to the clinician.

The authors happily conclude with the statement that on the whole there is good correlation between the serologic tests performed in the laboratory and the final clinical diagnoses. Modestly, they "realize and recommend that the physician should not rely for his diagnosis on laboratory tests alone." They quote from Winder L. Porter: "The vast majority of reactive serologic tests for syphilis can be satisfactorily interpreted if history taking, physical examination, epidemiological investigation and specific treponemal serologic tests are combined in an orderly manner."

Lindell and Koontz appear to have made their point that the FTA-ABS is a specific and reliable test for syphilis, and that the physician can rely upon it with considerable confidence. However one cannot escape the deduction that the diagnosis must depend basically on clinical judgment.

MALARIA

With thousands of young men returning to their respective communities after service in Vietnam, physicians must be alert to recognize and be prepared to treat exotic diseases with which they are quite unfamiliar. This point has been made quite dramatically by a report of a series of five fatal cases of falciparum malaria.*

Four medical officers from the Walter Reed

* Brooks, M. H., Kiel, F. W., Sheehy, T. W., and Barry, K. G.: Acute pulmonary edema in falciparum malaria. NEW ENGLAND J. MED. 279:732-736, (Oct. 3) 1968.

General Hospital and the Armed Forces Institute of Pathology reported the clinical and pathologic findings in five patients who succumbed as a result of acute pulmonary edema complicating an acute episode of malaria. One of the patients was a 24-year-old soldier who had been discharged upon his return to this country from Vietnam. Ten days after his discharge he was admitted to a civilian hospital in a semicomatose state. Except for stupor, the physical examination revealed no significant findings. The patient had a temperature of 103°F. a pulse rate of 120/min., respirations 80/min. and a normal blood pressure. A tentative diagnosis of encephalitis was made. Laboratory studies, including a urinalysis, blood counts and an examination of the spinal fluid, were essentially normal. Fortuitously, trophozoites of Plasmodium falciparum were detected on the blood film.

Despite therapy with chloroquine and quinine, the parasites did not disappear from the blood smear, the characteristic febrile course continued, the state of consciousness worsened, and on the fifth day the hematocrit had decreased to 16 per cent, and the hemoglobin to 5.4 Gm./100 ml. as a result of hemolysis. Over a period of 72 hours, four units of blood were given him, and the hematocrit increased to 22 per cent. On the sixth day the patient developed rapid, labored respirations. On the seventh day the respiratory symptoms continued, and he became cyanotic. Despite rapid digitalization, nasal oxygen, rotating tourniquets and the administration of aminophylline, there was no relief of his respiratory symptoms, and the patient died within three hours from refractory pulmonary edema. X-ray of the chest revealed marked vascular congestion and patchy infiltrates throughout both lungs which were considered compatible with pulmonary edema.

At autopsy the outstanding findings were those of pulmonary edema. The lungs were markedly edematous, and weighed 1,800 Gm. Microscopic examination revealed capillary congestion, pulmonary edema, widespread hyaline-membrane formation and hemorrhage into the alveoli. The brain was also edematous, and there were foci of necrosis and of perivascular hemorrhage.

In a discussion of the five cases, the authors pointed out that all were in excellent health before the development of Plasmodium falciparum infection. They all received conventional antimalarial therapy, but fever and central nervous system involvement persisted despite treatment that ordinarily is sufficient to control the clinical illness. Despite vigorous therapy, each one of the five patients died of acute pulmonary edema. This terminal condition occurred even though there was no evidence of congestive heart failure, of fluid retention or of circulatory collapse prior to the onset of the pulmonary edema.

The authors state that the pathogenesis of pulmonary edema in malaria is not understood. They postulate, however, that the acute phase of falciparum malaria is characterized by generalized vasodilatation, with clinical evidence of a decreased effective circulating blood volume. The resulting decrease in organ perfusion is accentuated by local changes in the microcirculation. Thus there results an aggregation of erythrocytes, diminished blood flow, increased capillary permeability and interstitial edema. Pulmonary edema in malaria is usually associated with severe infections that are either neglected or are found unresponsive to therapy. It would appear that in these patients there is an unrelenting progression of functional vascular abnormalities resulting in irreversible anatomic changes.

It is emphasized that Vietnam veterans are returning to civil life by the hundreds of thousands. When illness occurs in members of this group, serious diagnostic consideration must be given to the tropical diseases. In the returnee whose clinical course has been detailed above, it was the chance observation of parasites on a routine blood film that led to a prompt diagnosis. Delays in the diagnosis of malaria in former servicemen are inevitable unless the physician is fully aware of the patient's exposure, and of the protean manifestations of the disease.

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SURGERY FOR PERFORATED DIVERTICULITIS

A group of London surgeons have recently reported their experience with emergency resection in the treatment of perforated diverticulitis with spreading peritonitis.* Their results suggest that it is the procedure of choice in the management of this formidable condition.

Heretofore, as the authors point out, the usual procedure in this condition has been transverse colostomy and drainage. In 1965 the same authors reported a series of patients treated in the conventional manner with a mortality of 30 per cent. Though respecting the time-honored practice of providing surgical drainage, they arrived at the concept that emergency resection of the involved bowel seemed to offer better results by removing the source of persistent sepsis from the body. This principle guided surgical treatment of patients with this condition during the years 1964-1967.

The study group consisted of 25 patients—11 men and 14 women. The average age for both groups was 61 years, and the range was from 48 to 86 years. In 22 patients a purulent peritonitis was present, and in three there was gross fecal peritonitis. In 12 of the patients, perforation was readily apparent. The authors emphasize that theirs was not a selected group, but were consecutive patients, and that no patient was rejected as being unfit for operation, even though some of them were desperately ill. The one indication for operation was clinical evidence of generalized or spreading peritonitis. All patients had free purulent or feculent peritoneal fluid at operation. Frequently the exact cause of the peritonitis was not recognized prior to laparotomy.

Some form of emergency resection was carried out on all patients, except one with fecal peritonitis in whom a simple exteriorization was done. Primary end-to-end anastomosis was performed in eight patients, with additional transverse colostomy in one, and cecostomy in another; a Paul-Mikulicz excision was done in eight of the group; and Hartman operations in the remaining eight. The last mentioned of these operations is done if the inflammatory process extends too far distally, or if the patient is extremely obese. The affected bowel is excised, the distal end is closed, and the proximal end is brought out as a terminal colostomy.

The 22 patients with purulent peritonitis survived. The three patients with fecal peritonitis died. According to the authors, progress was remarkably smooth, for the most part, and there were no complications to make them regret having performed an emergency resection. Despite the fairly extensive mobilization required for the performance of a Paul-Mikulicz operation, no unusual complications were encountered. Restoration of continuity of the bowel after a Hartman operation presented no technical problems.

For the group of 22 patients, the average hospital stay for emergency resection was 25.4 days. At the time of discharge, continuity of the intestine had been restored in nine of the patients. When the report was written, continuity had been restored in 19 of the 22 survivors. An average total of 43 days' hospitalization was required by those 19 patients, including the initial admission and subsequent admissions required for closure of a colostomy or restoration of intestinal continuity.

Not included in the study were four patients who had peritonitis secondary to what proved to be carcinoma of the colon. Emergency resection has been subjected to criticism for this very reason, but the authors point out that although emergency resection may be an inadequate operation for carcinoma, it is lifesaving in peritonitis due to perforated diverticula. In the event carcinoma is found, a second operation may be performed when the patient's condition permits.

Emergency resection has been criticized because of its difficulty and because of the time required to perform it in a critically ill patient. The authors point out that in their experience the operation has not been as difficult as many elective resections for chronic diverticular disease in which pericolonic fibrosis has complicated the procedure. They acknowledge that though the amount of inflammatory reaction may be disconcerting, they generally have

* Roxburgh, A. A., Dawson, J. L., and Yeo, R.: Emergency resection in treatment of diverticular disease of colon complicated by peritonitis. BRITISH MED J., 3:465-466, (Aug. 24) 1968.

found that what appeared a discouraging situation could often be transformed by determined trial dissection into a surprisingly easy resection.

The choice of operation, according to the London group, depends on the experience of the surgeon and upon his evaluation of the patient. In their series there was only one patient in whom any form of resection was thought inadvisable, and that patient had fecal peritonitis and thrombosis of the common iliac artery.

The results of this study appear to support the authors' contention that in qualified hands emergency resection is the operation of choice in cases of spreading peritonitis due to diverticular disease of the colon.

METHOTREXATE THERAPY IN ADVANCED DERMATOMYOSITIS

A dramatic response to the administration of methotrexate in four patients with advanced dermatomyositis has recently been reported by physicians in the Immunology Service at New England Medical Center Hospitals, Boston, and at Tufts University College of Medicine.* Heretofore, corticosteroids have been the only therapeutic agents which have been effective in the treatment of dermatomyositis. Not all patients responded to the corticosteroids, however, and in many instances very large doses were necessary. The administration of methotrexate, which is recognized as a powerful inhibitor of antibody synthesis, represents an entirely new and empirical approach to the treatment of the disease.

The authors point out that the etiology and pathogenesis of dermatomyositis are unknown, and that there has been no evidence conclusively supporting immunologic abnormalities as a cause of the disease. Thus the response to methotrexate treatment cannot be ascribed entirely to an inhibition of immune responses. Despite the absence of a rationale for methotrexate treatment, the responses in the four patients reported justifies evaluation of the drug in other patients with this serious and disabling disease.

The methotrexate is given intravenously to these patients because it is then excreted within 24 hours. According to the authors, if the drug were given by mouth in comparable doses, it would have been highly toxic. It was given once weekly, and presumably there was recovery from its biologic effects between injections. The therapeutic regimen started with 25 mg. intravenously. If this was well tolerated, 50 mg. was given six days later. Then the dose was increased by 25 mg. increments every six days until the first sign of toxicity appeared. The earliest signs of toxicity were ulceration of the oral mucosa and leukopenia. In the event either of these reversible signs of toxemia appeared, the dose of methotrexate was reduced by 25 mg. until the maximum dose which did not produce symptoms was reached.

Three of the patients reported were bedridden when methotrexate therapy was instituted, and the fourth patient had such extensive muscle weakness that she was unable to get out of bed unassisted. The most dramatic case was that of a 16-year-old boy who clearly was dying from the disease. Despite treatment with prednisone in doses up to 200 mg./day, he was unable to lift his head from the bed, was unable to swallow and was emaciated and febrile. He was well enough to leave the hospital three weeks after the start of methotrexate treatments. Therapy continued for 1½ years, and the young man has continued to be symptom-free for almost two years, is completely well and is attending college. An attempt to administer the drug orally, 2.5 mg. every other day, resulted in leukopenia and a return of arthritis and dermatitis. The resumption of intravenous methotrexate led to a prompt remission. The three women, 46, 55 and 65 years of age, had similar though less dramatic responses to the drug.

Surely those patients and their families look upon their recovery from a serious and incapacitating disease as a miracle. The responses of these four individuals to the empirical use of methotrexate in a malady, the cause and pathogenesis of which are unknown, suggests that perhaps there still is a proper place for empiricism in medicine after all. The clinician cannot fail to question the rightness of some of the arbitrary decisions of the Food and Drug Administration.

* Malaviya, A. N., Many, A., and Schwartz, R. S.: Treatment of dermatomyositis with methotrexate. LANCET, 2:485-488, (Aug. 31) 1968.

President's Page

The Inevitable Is Occurring



"It is hardly lack of due process for the government to regulate that which it subsidizes."

With the federal government assuming more and more responsibility for the payment of medical fees, the above quote from the Supreme Court decision in Wickert vs. Filburn, November 9, 1942, will be of more and more significance to physicians in private practice.

As anticipated, the costs of Medicare have far exceeded the estimates of the social planners. The one item that is accessible to regulation will be the fees of the vendors.

Fortunately, under Public Law 89-97, we are still allowed the privilege of direct billing—in other words, serving the patient rather than the federal government.

I sincerely believe that every physician will find this to be the most satisfactory method in the majority of instances.

C. W. Talbot, M.D.

President

THE JOURNAL *Book Shelf*



Book Reviews

ATLAS OF PRECAUTIONARY MEASURES IN GENERAL SURGERY, by *Ivan D. Baronofsky,* M.D. (St. Louis, The C. V. Mosby Co., 1968. $23.50).

This atlas of surgery contains drawings, with appropriate comments, of 25 operative procedures that occurred during a six-month period in the author's surgical practice. It is by no means all-inclusive, although most of the commonly-done procedures are described. The author considers the atlas to be a book of "defensive surgery," with some emphasis given to the prevention of complications by means of thoughtful operative technique.

The book is well done, and the illustrations are described by Dr. Owen Wangensteen in the Foreword as both "beautiful" and "superb." You can't very well beat that.—*Daniel F. Crowley,* M.D.

MODERN TREATMENT, Vol. 5, No. 4, TREATMENT OF FLUID AND ELECTROLYTE IMBALANCE, ed. by *David D. Thompson,* M.D., and CURRENT TREATMENT OF CLINICAL TETANUS, by *Norman A. Christensen,* M.D., and *Delavan L. Thurber,* M.D. (New York, Harper and Row, July 1968. $16.00 per year).

Again the value of concise information presented in orderly fashion is demonstrated in this issue of MODERN TREATMENT. Nearly five years of these six-per-year books have been published, and I regret that I do not have all of them.

Fluid and electrolyte disorders can be correctly diagnosed on the basis of the sodium and potassium concentrations, the pH and the CO_2 content of blood and urine, and because these determinations are available in nearly all laboratories, prompt and vigorous therapy can be instiutted. In the better laboratories arterial pO_2, pCO_2, and pH augment these determinations. The 11 recognized authorities who contributed to the discussion have explained a course of action, using the above laboratory tools, in all major acid-base problems, potassium and magnesium abnormalities, disturbances in surgical patients, infancy, and pregnancy.

Clinical tetanus treatment is summarized in the second article in the July, 1968 issue. Five cases are used to explain the drug therapy and nursing care in mild cases and in fulminating predicaments—*Thomas D. Ghrist,* M.D.

INTERNAL MEDICINE BASED ON MECHANISMS OF DISEASE, ed. by *Peter J. Talso,* M.D., and *Alexander P. Remenchik,* M.D. (St. Louis, C. V. Mosby Company, 1968. $17.50).

This book is designed for students from 21 to 75. It is purposefully a rather small book of 770 pages. There are 31 contributors. The sections are (1) Internal Medicine as a Science and Art, (2) Basic Mechanisms of Disease, (3) Diseases of the Heart and Blood Vessels, (4) Diseases of the Respiratory System, (5) Diseases of the Digestive System, (6) Diseases of Metabolism, and (7) Other Fundamental Diseases.

Each section is limited to a brief description of the disease processes involved, followed by a more or less lengthy description of their basic mechanisms. There is a limited discussion of differential diagnosis and treatment, in some instances, but these latter two phases of the disease processes are not stressed, particularly because differential diagnosis and treatment of materials are to be found in many other available text books. The book itself is printed in fairly large type, and is liberally sprinkled with diagrams, tables and figures of various types.

In this helter-skelter age when doctors and students are exposed to so much paper work and so much "busyness" that they hardly have time to read the newspaper, a book such as this is a handy one. The majority of articles in our journals deal with tiny aspects of disease, of physiology or of biochemistry. When we read these journals it is difficult for us to derive any general concepts of the processes with which we are dealing day in and day out. The purpose of this book is to garner the basic mechanisms of disease so that we may have a sturdy base on which to stand. We are in great need of books such as this and of articles in our journals which might help us toward a broader understanding of disease processes. This particular book is excellent in this regard, and should be of great help to medical students, internists, and residents, but particularly for internists and general practitioners. One would hope that the editors will continue, every four or five years, to re-edit this book and keep us up to date.—*Daniel A. Glomset,* M.D.

PEDIATRIC THERAPY 1968-69 (THIRD EDITION), ed. by *Harry C. Shirkey,* M.D. (St. Louis, C. V. Mosby Company, 1968. $25.00).

This is the third edition of this outstanding book on pediatric therapy. The first edition was published

(Continued on page 1250)

If you think the pink pill for U.R.I. symptoms is built for speed and endurance you're on the right track.

Here is a tablet that begins to relieve symptoms of upper respiratory infection quickly—a tablet that works for hours to make it easy for your patient to enjoy continuous relief.
Novahistine Singlet combines effective dosage of an antipyretic-analgesic with a vasoconstrictor-antihistamine formulation to relieve not only the congestion, but also the fever and the aches and pains that almost always accompany upper respiratory infections.

A total daily dosage of 3 or 4 tablets will normally provide the continuous relief your patient expects. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

PITMAN-MOORE Division of
The Dow Chemical Company,
Indianapolis, Indiana.

Novahistine®
Singlet decongestan analgesic

(Each tablet contains: phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 8 mg.; acetaminophen, 500 mg.)

DOW

Book Reviews

(Continued from page 1248)

in 1964 and the second in 1966. Frequent revision is made necessary by the remarkable development of new drugs and in the constant improvement of therapeutic procedures.

The editor, Dr. Shirkey, acquired a degree in pharmacology before he went to medical school. He had one of the country's choice residencies in pediatrics under A. Ashley Weich, at the University of Cincinnati, following which he was in private practice for several years. In 1960, he became medical and administrative director of the Children's Hospital of Birmingham, Alabama, and professor of pharmacology at Howard College. His expertise in the fields of pharmacology and pediatrics have gained him national recognition by his appointment in 1952 as chairman of the Pediatric Panel of the Revision Committee for the U. S. Pharmacopeia, and in 1960 as chairman of the Committee on Admissions of the National Formulary. In addition, his exceptional talents are utilized on a national scale in many other ways, among which may be mentioned author of articles for textbooks and pediatric journals. He was recently appointed chief of the Department of Pediatrics in the new medical school in Hawaii.

This 1,294-page book has 114 chapters, with 351 illustrations which add much to its overall usefulness. There are 89 contributing editors, most of whom are nationally recognized experts in their fields. In the present edition all chapters have been revised to bring them up-to-date, and seven new chapters have been added. At the end of the book, there is a 90-page table of drugs, giving doses, generic and trade names, contraindications, warnings, cautions, toxicities, and the dosage forms in which they are available.

All physicians who deal with therapy in children will find this an invaluable reference. It is highly recommended for generalists, pediatricians, house staffs of hospitals, and medical students.—*LaVerne Wintermeyer,* M.D., and *Lee Forrest Hill,* M.D.

Books Recieved

SYNOPSIS OF PATHOLOGY, by *W. A. D. Anderson,* M.D., and *Thomas M. Scotti,* M.D. (St. Louis, C. V. Mosby Company, 1968, $10.50).

ATLAS OF EAR SURGERY, by *William H. Saunders,* M.D., and *Michael M. Paparella,* M.D. (St. Louis, C. V. Mosby Company, 1968, $27.50).

SURGERY OF THE ADRENAL GLANDS, by *Lawrence W. O'Neal,* M.D. (St. Louis, C. V. Mosby Company, 1968, $19.50).

COMMUNICABLE AND INFECTIOUS DISEASES, SIXTH EDITION, by *Franklin H. Top, Sr.,* M.D., (St. Louis, C. V. Mosby Company, 1968, $28.50).

BRAY'S CLINICAL LABORATORY METHODS, SEVENTH EDITION, revised by *John D. Bauer,* M.D., *Philip G. Ackermann,* Ph.D., and *Gelson Toro,* Ph.D. (St. Louis, C. V. Mosby Company, 1968, $14.85).

HANDBOOK OF PEDIATRIC EMERGENCIES, FOURTH EDITION, by *Charles Varga,* M.D. (St. Louis, C. V. Mosby Company, 1968, $19.75).

COMPREHENSIVE REVIEW FOR MEDICAL TECHNOLOGISTS, ed. by *Francis E. Dolan,* Ph.D. (St. Louis, C. V. Mosby Company, 1968, $6.95).

Current and Proposed IRMP Projects

Proposals for projects to be undertaken by, or in cooperation with, the Iowa Regional Medical Program have produced a number of concrete results, plus tentative formulations of other projects. This has been reported by Willard A. Krehl, M.D., Ph.D., coordinator of the IRMP, after a backward glance at the Regional Medical Program's progress to date.

Approval of five specific projects by the Division of Regional Medical Programs of the Department of Health, Education and Welfare was accompanied by a three-year operational grant of $1,260,550 effective July 1 of this year. The following projects share in a first-year fund grant of $312,841:

(1) A Comprehensive Program in Cerebrovascular Disease Management.

(2) A Central Treatment, Education and Demonstration Facility for the Comprehensive Management of Patients with Cerebrovascular Disease.

(3) A Training Program for Cardiopulmonary Resuscitation.

(4) A Program for Education and Training for Nurses and Physicians Responsible for the Operation of Intensive Coronary Care Units.

(5) Coordinated Out-of-Hospital Services for Heart, Stroke, Cancer and Related Diseases in Polk County (financed for a third year after initiation as a Community Action Plan program).

These projects, Dr. Krehl points out, comply precisely with the objectives of the Regional Medical Programs as set forth in Public Law 89-239: "To unite the health resources of the nation, region by region, in close working relationships which will speed the transmission of scientific knowledge and methods to the people whose lives depend on them." Such effort is to be specifically oriented to the fields of heart disease, cancer, stroke and related diseases.

Four additional projects have now received approval of the Iowa Regional Advisory Group and are to be submitted to the Division of Regional Medical Programs for consideration as IRMP-funded proposals.

First of these, entitled "A Continuing Cancer Educational Program for Physicians," would provide instruction for physicians and paramedical workers concerned with the care of cancer patients in this state through the medium of the Central Tumor Registry of Iowa.

The second is described as "A Program for the Application of New Techniques Utilizing a New Medical Team Approach for the Diagnosis and Follow-up Care of Children with Heart Disease in the State of Iowa."

A third, entitled "Mobile Coronary Care Unit," has been drafted to test the feasibility of providing comprehensive emergency care for a victim of cardiac arrest while he is being transported to a hospital equipped with an intensive coronary care

(Continued on page 1254)

INFORMATION FROM THE
IOWA HEART ASSOCIATION

The Late-Apical Systolic Murmur

JOSEPH W. LINHART, M.D.

During the last five years evidence has accumulated that an apical systolic murmur confined to the latter part of the systole, unrelated to coronary artery disease, is not necessarily benign or functional. The late systolic murmur was initially related to extracardiac structures, such as the pericardium. Since these late systolic murmurs were frequently associated with mid-systolic clicks, and since pericardial adhesions were seen at autopsy in some of the latter patients, the belief in a benign extracardiac origin was a natural assumption. However, a number of observers have recently presented evidence that the late systolic apical murmur and even the mid-systolic clicks may (1) arise from the mitral valve and its supporting structures, (2) be associated with a characteristic deformity of the mitral valve, (3) be associated with mild to moderate late-mitral regurgitation and (4) not necessarily be benign in clinical course.

CLINICAL CHARACTERISTICS

Patients with late-apical systolic murmurs and late-mitral regurgitation have generally been young or middle-aged adults including a predominance, in our experience, of females between 20-40 years of age. Occasionally, a history of rheumatic fever is elicited, but generally no definite etiologic factor can be ascertained for the murmur. Oftentimes the murmur was first noted in childhood, and this factor plus the occurrence in more than one family member, suggests a congenital and familial incidence in some patients. Most patients are asymptomatic, and were referred for study only because a murmur was present on routine examination. Some may have palpitations, easy fatigability and breathlessness on heavy exertion. Functionally, most are class I or II (N. Y. Heart Association classification).

From the Section of Cardiology, Department of Internal Medicine, Mount Sinai Hospital of Greater Miami, Miami Beach, and the University of Miami School of Medicine, Coral Gables, Florida. Dr. Linhart is chief, Cardiac Catheterization Laboratory, Mount Sinai Hospital of Greater Miami, Miami, Florida.

APEX PHONOCARDIOGRAPHY

No significant vibrations are present in early systole. The murmurs occupy the last half or two-thirds of the systole, and tend to be crescendo in character ending with the aortic closure sound. The murmur may be initiated by one or more systolic clicking sounds. Mostly, the murmurs would be graded 2/6, and there is little radiation of the sound from the apex. The late-systolic murmur responds to drugs in a fashion similar to the typical holosystolic murmur of mitral regurgitation. With phenylephrine, which raises blood pressure and LV pressure, there is an intensification of the holo- and late-systolic murmurs of mitral insufficiency. When amyl nitrite is inhaled and the systemic arterial pressure decreases, these murmurs decrease in intensity.

ELECTROCARDIOGRAMS

In general, the electrocardiogram is normal, although occasionally the criteria for left ventricular hypertrophy may be present. Some cardiologists have described significant electrocardiographic changes in association with late systolic clicks and murmurs. These generally consisted of abnormal T waves and S-T segments in leads 2, 3 and AVF. In addition, ventricular extrasystoles and paroxysmal tachycardia were seen.

CHEST ROENTGENOGRAPHY

Generally, no significant abnormalities are detected by roentgenography. In a few patients, however, definite but mild left-ventricular and left-atrial enlargements are apparent.

CARDIOVASCULAR HEMODYNAMICS

In most instances, intracardiac pressures and the cardiac index are normal. Rarely, mild elevation of left ventricular end-diastolic pressure and left atrial A wave are found.

ANGIOGRAPHY

Cineangiography in the right or left anterior oblique projections demonstrates the characteristic mitral-valve deformity. During early systole the leaflets of the mitral valve balloon or prolapse backward into the left atrium as contrast material passes from the left ventricle into the aorta. The only during the latter part of the systole does the contrast material regurgitate from the left ventricle to the left atrium. The degree of mitral regurgitation is usually only mild to moderate, and the left heart chambers are normal in

size. A few patients have been seen, however, with more severe "late" mitral regurgitation with definite left-atrial and left-ventricular enlargement.

Simultaneous electrocardiograms, external and internal phonocardiograms, and pressure tracings have been compared with the cineangiographic data. There has been a fair correlation between the beginning of the late systolic murmur and the first appearance of the contrast material in the left atrium. The systolic click coincided with the timing of the maximum prolapsing of the mitral-valve leaflets into the left atrium.

CLINICAL COURSE

In patients with a late-systolic murmur, mild mitral regurgitation, normal electrocardiogram and normal chest X-ray, initial studies have shown a relatively uncomplicated clinical course.

Since this type of murmur is heard so frequently in any diagnostic cardiac clinic, we believe that the lesion is generally benign. It is certainly possible that some of these patients may progress to the development of a holosystolic murmur and acquire the hemodynamic as well as clinical characteristics of the common forms of mitral valve insufficiency. Some of the patients with holosystolic murmurs may have begun their clinical courses in this way, and were not followed up closely because of the initially benign course. Hence, the transition may have been missed. Only by recognizing and exercising close surveillance over the patient with a late-systolic murmur, will the ultimate prognosis be known.

It must be appreciated, however, that some of these patients may develop bacterial endocarditis following dental procedures. Therefore, the usual precautions against bacterial endocarditis should be instituted whenever a patient with this type of murmur is seen. In addition, we have seen two patients with late-systolic murmurs who had 3+/4 mitral regurgitation cineangiographically, and definite mild left-ventricular and left-atrial enlargement. If their clinical courses follow that of other forms of mitral valve disease, surgery may be necessary at some future time.

There have been reports of a group of patients with late-systolic murmurs and midsystolic clicks, abnormal T waves, prolonged Q-T intervals, prominent U waves and a high incidence of extrasystoles and paroxysmal tachycardia. A familial incidence was noted and also the occurrence of psychiatric disorders. One patient had seizures related to atrial flutter, with 1:1 conduction, and sudden death occurred in one patient.

Therefore, although the course in these patients is usually benign, the physician must guard against the development of bacterial endocarditis and be prepared to control the arrhythmia that may appear in those with abnormal resting electrocardiograms.

Physicians' Attitudes on Sex Counseling

Americans—especially teenagers and wives—are turning to their physicians for sexual counseling far more frequently now than they did five years ago, a newly-completed national survey has found.

The survey was reported in the second issue of ORTHO PANEL, published by the Ortho Pharmaceutical Corporation, of Raritan, N. J. The questionnaires are mailed to 5,000 physicians (general practitioners and obstetricians and gynecologists). The current survey's 31.9 per cent response indicates the American doctor's high degree of interest in sexual counseling.

A heavy majority (63 per cent) of the 1,595 physicians answering the latest questionnaire believe that their patients' sexual maladjustments are most often caused by psychological problems.

Among sexual problems the surveyed doctors said they treat frequently are sexual dissatisfaction, frigidity, impotence and homosexuality. Compared with five years ago, they see patients with homosexual problems with about the same frequency. Frigidity is seen just a bit more frequently than five years ago. Impotence apparently is increasing. So is sexual dissatisfaction. Also, teenagers with sexual problems are more frequently seen by physicians now than formerly.

Commenting on the survey, Dr. Robert W. Kistner, assistant professor of obstetrics and gynecology at Harvard, said important causes of complaints of sexual dissatisfaction by wives are their husbands' sexual ineptness and their own increased sexual aggressiveness. "Much of the frustration is in their minds; their complaints are related to the extensive publicity that has been given to the 'forever feminine' aspect," Dr. Kistner said. While he blamed the husband's "lack of foreplay and lack of stimulation," he also said the wife is likely to be "more sexually aggressive, more desirous of having full orgasm, and not getting it."

Among psychological causes of dissatisfaction, said Dr. Harold I. Lief, director of the Division of Family Study and professor of psychiatry at the U. of Pennsylvania, "The most important is the influence of 'emergency emotions.' The emotions are fear and rage, hate and guilt, and sometimes jealousy. Primarily fear and rage are the emotions that inhibit the sexual response."

As for solving patients' sexual problems, Dr. Kistner believes that the doctor "who will take the time to instruct the patient and to discover the basis of each complaint can handle most patients well."

Seventy per cent of the physicians surveyed see one to five patients with sexual problems every week. Seventy-five per cent said they referred patients whom they could not help to psychiatrists.

Iowa Association of Medical Assistants

An Appointment Is an Appointment!

An appointment is an appointment if it is made with good intentions by both parties, and if it is kept. We must remember that appointment making and changing constitute a two-way street. Both the medical assistant and the patient need occasional reminders of that fact.

Perhaps careless appointment-making comes about because patients are careless about keeping such dates. A succession of "no-shows" or late arrivals starts a vicious circle. The medical assistant—anxious to avoid wasting the doctor's time—reacts by telling several patients to come at one and the same time, or neglects to tell the doctor that the first appointment has been made for two o'clock. A packed waiting room is the result. Patients and assistants are frustrated, and the doctor, who is unaware of the outer-office atmosphere, doesn't know that the people waiting to see him are forming unfavorable opinions of the office, the staff and him.

Surely the above isn't a picture of *your* office, but perhaps you'll consent to read the following suggestions, anyway.

A "week-at-a-glance" is an excellent book for any office—one that is broken down into convenient time intervals. It is wise to use just one book for all appointments, including the doctor's personal ones. The latter can be written with a red pencil, and all of the others with a black pencil. We know that pencils are inappropriate for making permanent records, but they are acceptable for making appointments because changes must frequently be made in them, and there is no need to preserve appointment records for months or years afterward.

The appointment book should be kept on the secretary's desk, and a copy of each day's schedule should be placed on the doctor's desk prior to his arrival. As the appointments are kept they can be checked off. That record can be an aid in the day's posting of accounts.

APPOINTMENTS MADE BY PHONE

When a patient makes an appointment by phone, be sure to determine the correct spelling of his or her surname, and get the first or given name, the middle initial and the phone number. Difficult situations can be avoided through careful attention to such details.

A son and his father frequently have identical first names, and if you were mistakenly to make a reminder call to Frank C. Brown, the father, regarding an appointment made by Frank B. Brown, the son, the parent could become seriously concerned and the son could be greatly annoyed. The son may have preferred that his parents know nothing about the visit to a doctor. This has happened!

Whenever a new patient makes an appointment by phone, use the following four-point outline to save time:

1. Name (complete)
2. Address and phone number
3. Nature of the patient's trouble
4. Who referred the patient.

TIMING

Arrange the appointment at the most convenient time for the patient, insofar as the doctor's schedule permits. If, from the stated purpose, you know the visit will require 30 minutes, and the patient wants to come at a time when only 15-minute visits are available, suggest another time and day, except in the case of emergencies.

Repeat the time and date to the patient over the phone, so as to avoid misunderstandings. You might say: "We'll see you on Tuesday, December 4, at 2:00 p.m., and you should arrange to be here for at least 30 minutes."

SCHEDULING

Efficient scheduling of a doctor's appointments is an art, but you can acquire it by following certain basic principles, and experience will help you perfect it. Rather paradoxical objectives should be kept in mind. The doctor wants to see as many patients as humanly possible, but he should not be rushed. *A crowded reception room does not necessarily indicate that the doctor has a large practice; more frequently it is an indication of inefficient scheduling!*

Allow more time for a patient's first visit than for a repeat visit.

Allow more time for examinations than for consultations and dressings.

Schedule injections between appointments.

If the patient will have to undress in preparation for an examination, schedule another appointment for the same time as his. The doctor can confer with one patient while the other is dressing, and

report his examination findings after the consultation.

Avoid the double booking that culminates in a roomful of patients and a reversion to the first-come-first-served basis.

Allow a little time for the doctor to take a break. Allow time, also, for him to care for emergencies, and to respond to his list of phone calls.

Use appointment cards. Brief instructions can be noted on the back of such a card. The assistant must *never* use the physician's prescription pads for instructions. Writing down a brief instruction for the patient to take with him or her eliminates your having to make a phone call later.

The patient should be informed that the physician intends to call at his or her home at a specific time on a certain day. This appointment, too, should be noted in your book, so that you can locate the doctor if an emergency arises.

There are times when appointments must be cancelled. When this becomes necessary, do it immediately. If you can reach the patient by phone, ask his help in rearranging the appointment. Explain briefly what has happened, and if all appointments for a half-day or a full day are being postponed, say so. This approach eliminates the possibility that the patient will feel that he or she has been singled out as just one cancellation.

When a patient calls to cancel an appointment, offer to reschedule it.

If the doctor has been detained and his first patient or two are waiting for him, let them know. They may choose to reschedule or to do an errand before the doctor arrives.

Remember that if your office is to run by appointments, you must try always to keep those appointments. Nothing annoys a patient more than a seemingly never-ending wait in a doctor's office. The patient has his own schedule, and it should not be set awry by faulty scheduling on your part. Of course "the best laid plans gang aft agley," and an emergency, a patient without an appointment or a referral can upset your perfectly timed schedule.

Try scheduling for efficiency!

—MARIAN LITTLE

Current and Proposed IRMP Projects

(Continued from page 1250)

unit. Under the proposal, the mobile unit would be based at Mason City.

Fourth of the IRAG-approved proposals would involve development of a demonstration model of a health information system for Iowa. It would be administered by the Division of Medical Economics of the School of Business Administration at the University of Iowa.

In carrying through present and subsequent projects of the IRMP, Dr. Krehl notes, special emphasis will be placed on the development of meaningful cooperative relationships among all segments of the health-care team in order to enhance the diagnosis, treatment and care of patients with heart disease, cancer, stroke and related diseases.

To assure skilled guidance, categorical advisory committees have been formed in each of these fields. These are being supplemented by similar advisory committees involved with particular developmental areas or disciplines. Three such advisory committees already organized are concerned with continuing professional education, nursing and dentistry.

Two field consultants are busily engaged in communicating the purposes of the Iowa Regional Medical Program to interested persons and groups throughout the state and encouraging the evolvement of new project proposals based on local—and especially, area—needs.

Following is the program for training physicians in intensive coronary care management which is to be offered by IRMP at University of Iowa Hospitals on December 2-6. Since enrollment was limited to six and since this issue of the JOURNAL is unlikely to reach physicians before it starts, the program is summarized here in order that interested doctors can be helped to decide whether to enroll for one of the two or three identical sessions that will be offered in Iowa City during the coming 12 months.

Monday, December 2

8:00 a.m. Orientation and Pre-Quiz
9:00 a.m. Coronary Care Unit Background and Philosophy—Dr. D. L. Warkentin
10:00 a.m. Cardiac Anatomy Review—Dr. Michael E. Korns
1:00 p.m. Introduction to Arrhythmias—Dr. E. O. Theilen
4:00 p.m. EKG

Tuesday, December 3

8:00 a.m. Cardiac Catheter Laboratory/Cardiac Rounds and CCU Observation
11:00 a.m. Cardiogenic Shock—Dr. J. W. Eckstein
1:00 p.m. Cardiology Conference
3:00 p.m. Vasopressors and Adrenergic Drugs—Dr. F. A. Abboud
4:00 p.m. EKG

Wednesday, December 4

8:00 a.m. Cardiac Catheter Laboratory/Cardiac Rounds and CCU Observation
11:00 a.m. Cardiopulmonary Resuscitation—Dr. Warkentin
1:00 p.m. Review of CCU Techniques: Electrode and Catheter Placement, Transducers, Arterial Cannulation
4:00 p.m. EKG

Friday, December 6

8:00 a.m. Organizing CCU Policies—Dr. Warkentin
10:00 a.m. Nursing Problems and Responsibilities—Mrs. J. Smith, R.N.
1:00 p.m. Cardiac Surgery Conference
3:00 p.m. Quiz

THE DOCTOR'S BUSINESS



Investment Fund Withdrawal Plans

HOWARD D. BAKER
Waterloo

Many retired or soon-to-be retired investors would like more income and some are wondering about the feasibility of investment-fund withdrawal plans. Such plans have recently come into greater popularity as the result of SEC liberalization of restrictions on the advertising of performance results by investment funds.

The idea behind these withdrawal plans is simple. You invest a given amount in a fund, then request that the fund's regular dividends be supplemented with a sufficient principal withdrawal to result in a fixed monthly income check. In recent years market values have risen sufficiently to more than offset reasonable withdrawals of principal.

The accompanying table is from the sales literature of one of the leading investment funds. After ten years, the account shows a theoretical remaining balance in excess of $21,000, representing appreciation of 125 per cent despite withdrawals of $75 each month, or 9 per cent of the original account.

Year Ended 12/31	From Dividends	From Principal	Annual Total	Value of Shares Remaining
1956	$392	$508	$900	$ 9,482
1957	372	528	900	8,964
1958	359	541	900	12,084
1959	378	522	900	11,895
1960	406	494	900	11,720
1961	434	466	900	15,390
1962	502	398	900	16,124
1963	556	344	900	18,291
1964	598	302	900	23,760
1965	662	238	900	21,360

Mr. Baker is a partner in Professional Management Midwest, and manager of its Financial Planning Department. He majored in accounting and business administration at U. of I., and was an agent for the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

On the same 9 per cent basis this investor could increase his monthly withdrawal from $75 per month to $160 per month for the second ten-year period—and would very probably not suffer any serious depletion of his capital.

Generally, the investment funds require a policyholder to have at least $10,000 in his account to be eligible for plans permitting withdrawals ranging from 6 to a maximum of 12 per cent of original principal, annually.

A precise study by the University of Chicago, using modern computers, recently disclosed that over the past 35 years common stocks have yielded just over 9 per cent, compounded annually. This gain included both dividend yield and price appreciation.

In considering a scheme such as this the investor should bear in mind that he risks depletion of principal during prolonged periods of stationary or declining markets. In such plans it is anticipated that upward trends in the market will counteract stationary and downward trends to maintain principal at a level at least equal to the starting one.

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STATE DEPARTMENT OF HEALTH

James F. Speers M.D.

JAMES F. SPEERS, M.D., M.P.H., COMMISSIONER

Accidental Falls in Infancy*

"The prevention of falls in infants, our most precious and important national resource, certainly merits greater attention and effort by the medical profession and by all organizations interested in the welfare of infants."

The problem of injury from falls is well appreciated by pediatricians. Their actual frequency in this age group, and the incidence of associated intracranial injury, have not been thoroughly studied. Falls of infants under one year of age are particularly dangerous. The brain is growing rapidly at that age, the skull has a thinner wall than at any other time of life, and damage to nervous and circulatory systems at that early developmental stage may interfere with all later learning.

A report from a team of researchers who made a study of falls by 536 infants under one year of age included a list of circumstances related to the falls. The attendant situations were summarized in an attempt to assess the types of equipment, the design factors or the equipment failures, if any, that had contributed to the accidents.

* The information presented here is based on a report of research findings by Harvey Kravits, M.D., a professor of pediatrics at Northwestern University, together with Gerald Driessen, Ph.D., Raymond Gomberg, M.D., and Alvin Dorach, M.D. Two groups of subjects were studied simultaneously—one group of 336 from a suburban private pediatrician's practice, and another from an urban pediatric clinic.

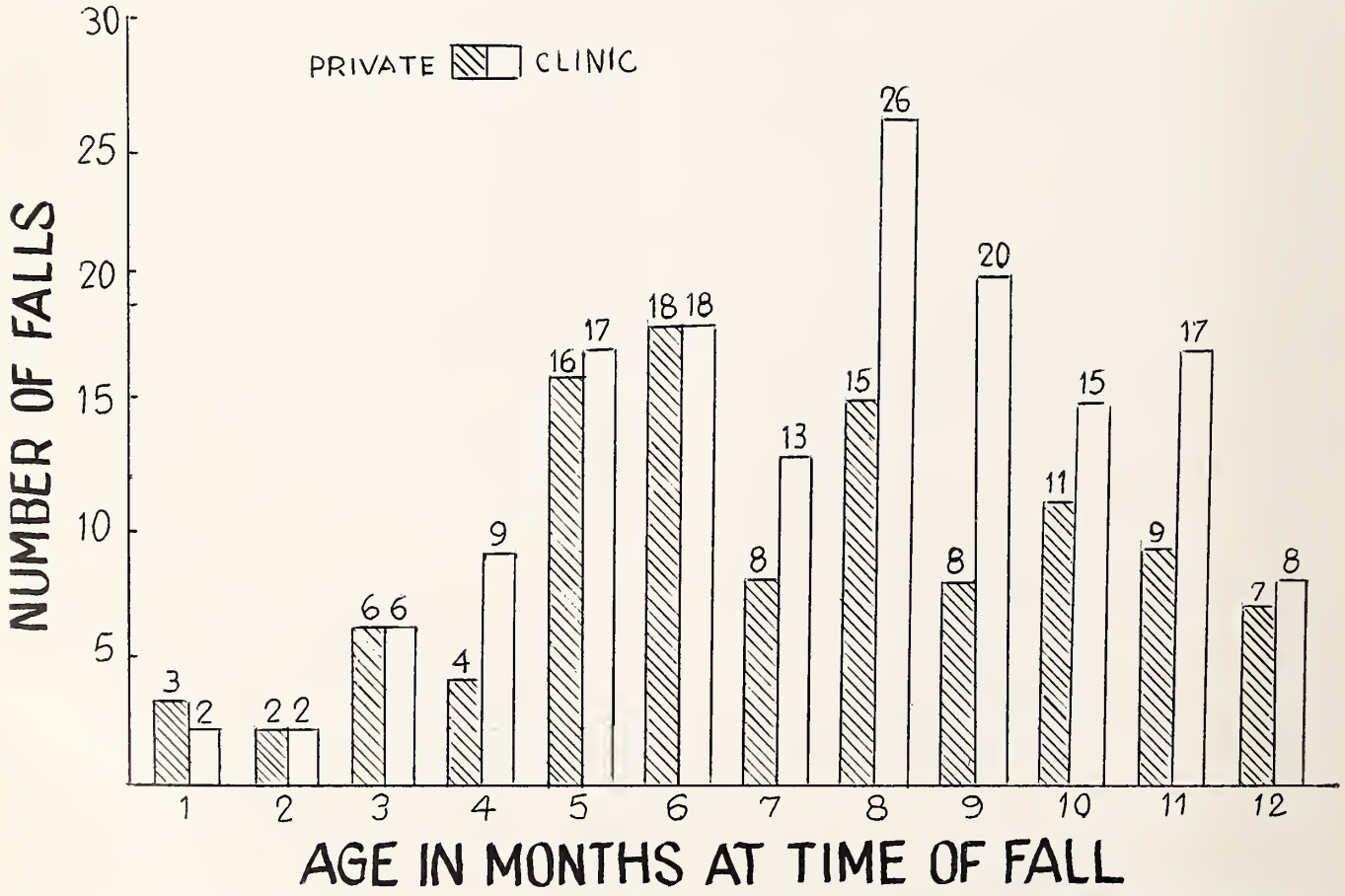


Figure 1. Frequencies of falls by ages, in months, of infants in the two groups studied by Kravits et al. The accidents occurred, for the most part, in homes, not in doctors' offices, hospitals or other institutions. The groups thus might better have been coded "suburban" and "urban," rather than "private" and "clinic."

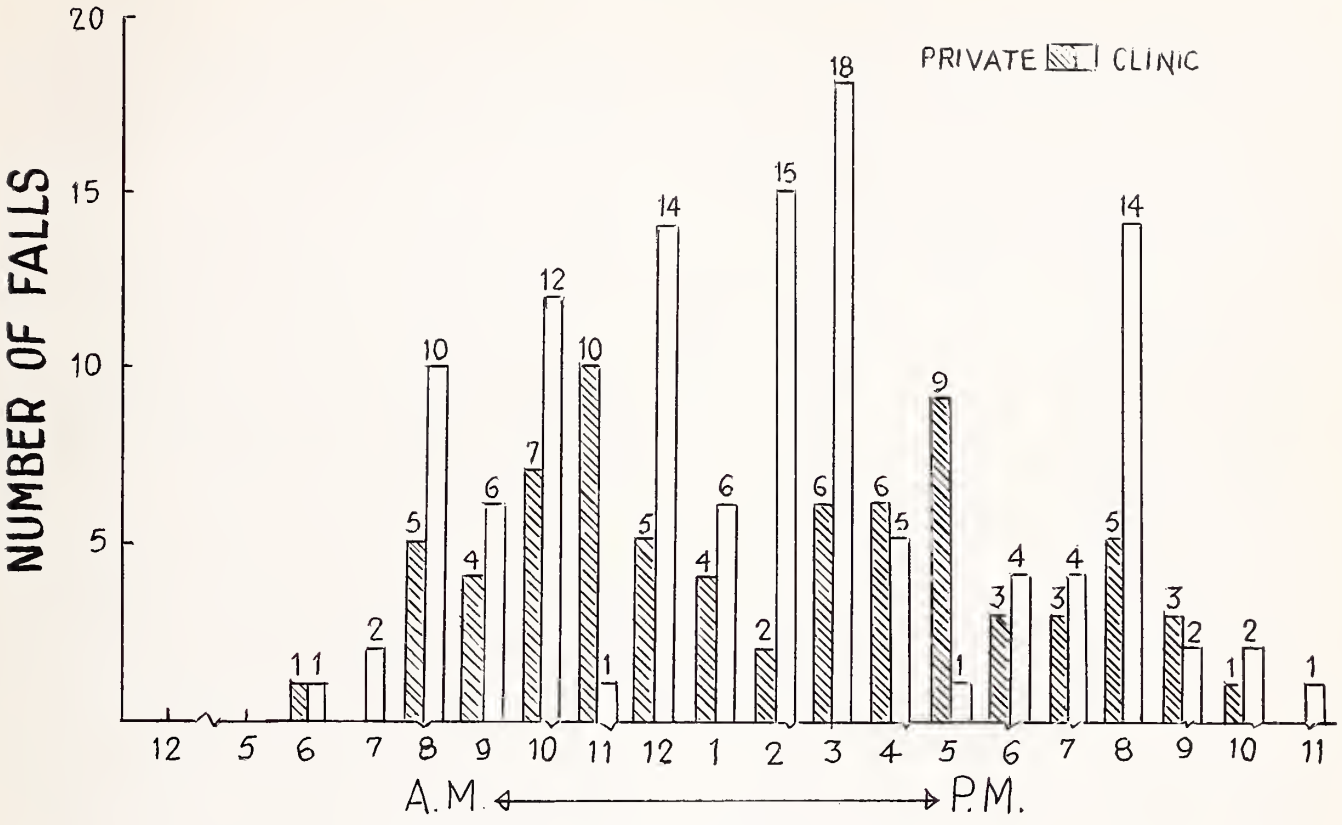


Figure 2. Incidence of falls by time of day or night.

It should be noted that many parents are fearful of reporting falls, and that baby-sitters and maids may fail to report falls to the children's parents.

After the first five months of life, infants begin to roll from the prone to the supine position, to sit up, to pull themselves to a standing position and to climb. Many parents, especially if the child is their first, are unprepared to cope with these new motor activities, and underestimate the resultant hazards.

Falls from dressing tables, adult beds and couches cause severe injuries. Falls requiring hospitalization tend to be from the higher surfaces. Dressing tables typically are 36 inches in height. A rough range of heights of adult beds or couches was found to be from 18 to 22 inches, or slightly less than two feet. Serious intracranial injuries rarely resulted from falls from those lower levels. The presence and the thickness of rugs also have an effect on the severity of injury.

Further study, the report suggested, may show that the infant's head strikes the floor first, perhaps because there is a greater weight in the upper half of a baby's body, especially in the head. At birth, the head constitutes 25 per cent of the infant's total length. His topheaviness may contribute to the frequency of head involvement. Also, it is important to note that in climbing out of a crib, the child is quite likely to fall "head first."

Mechanical factors in the design of infant furniture contribute to falls in infancy. The commonest preventable accident for children in the study groups was occasioned by the youngster's climbing out of a crib with the sides up. More attention should be given to crib design, and the growth and development patterns of infants should be taken into consideration. The "boxes of bars," today, have only four- to six-inch ratchets—the metal slides that allow height adjustments of the crib sides. Longer ratchets should be added, so that the mattress can be lowered closer to the floor and the sides raised higher. In hospitals the use of netting over beds has proved helpful in preventing infants from falling. At least two babies climbed out of cribs by standing on the top of inside bumper guards. Large toys and boxes on which the infant might stand should not be left in the crib.

Infants' dressing tables can be designed to provide greater safety. Many falls have occurred when mothers bent down or reached for a diaper or turned away from the infant for just a second or two. Few mothers were found who took the precaution of strapping the infant to the dressing table. Manufacturers of infants' furniture should seriously consider adding sides to the dressing table to prevent the infant from rolling off. The tables might also have concave surfaces instead of the present flat ones. Lowering the height of the dressing table is needed.

Doctors' offices and clinics also should have safer equipment. The safety guard that is attached to an infant scale is a good example. The

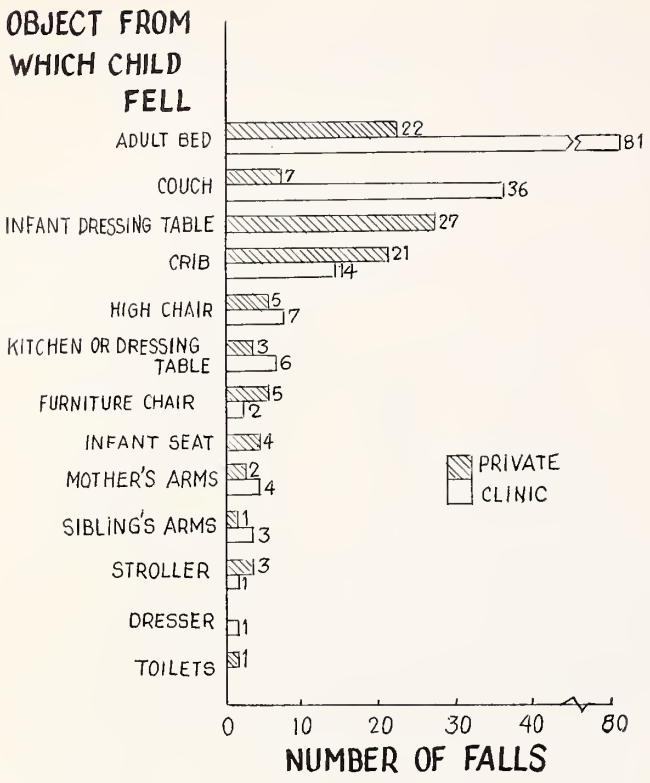


Figure 3. Frequencies of falls as related to the objects from which the children fell.

design is similar to a nylon-netted playpen.

Most falls are due to errors in judgment by the mother, and her lack of awareness of the dangers of falls during infancy. In educating mothers, more emphasis should be put upon accident prevention during the first year of a child's life. Posters and other visual aids can be displayed on the obstetrical floors of every hospital to alert each mother to this problem. Lectures on the prevention of falls in infancy should be given to every mother by the physicians and nurses.

There is a need for more research on the long-term effects of falls on the head in infancy. Studies are needed to determine whether minimal brain damage can occur following those falls, even though no fractures or immediate symptoms of intracranial injury may be observable. Also there is a need for studies of the relationship between head injuries produced by falls in infancy and subsequent learning problems.

Use the Want Ad Section of Your
JOURNAL
Advertising FREE to members and wives of deceased members

Recommendation of the Public Health Service Advisory Committee on Immunization Practices

The Public Health Service Advisory Committee on Immunization Practices completed the following supplementary recommendation on influenza control in the civilian population.

A2 INFLUENZA VIRUS VACCINE, MONOVALENT—1968-69

The Public Health Service Advisory Committee on Immunization Practices recently recommended that adults and children with chronic debilitating diseases and all those in older age groups be vaccinated with the new monovalent vaccine, A2/Aichi/2/68 (Hong Kong Variant) when it becomes available (MMWR, Vol. 17, No. 35, week ending August 31, 1968). It is to contain 400 chick-cell agglutinating (CCA) units per dose.

Although effectiveness of the new vaccine can be substantiated with certainty only by field use, a single dose can be expected to afford significant protection on the basis of experience with comparably potent monovalent influenza vaccines. If field tests indicate that a booster dose is necessary a further recommendation will be made.

Immunization should begin as soon as practicable after the vaccine becomes available. It is important that the vaccine be administered before influenza occurs in the immediate geographic area, because there is at least a two-week interval between vaccination and maximal antibody response.

*Vaccine Dose (Influenza Virus Vaccine, Monovalent):** All injections should be given subcutaneously (the intradermal route is not recommended for primary immunization).

Adults and Children Over 10 Years Old: 1.0 ml.
Children 6 to 10 Years Old: 0.5 ml.†

Children 3 Months to 6 Years Old: 0.1-0.2 ml. on two occasions one to two weeks apart.†

Contraindication. Since the vaccine viruses are propagated in eggs, the vaccine should not be administered to anyone who is hypersenitive to eggs.

* The dose volumes indicated are based on vaccine containing 400 CCA units per 1.0 ml. Equivalent dose volumes of highly purified monovalent vaccine may differ, but are indicated by the manufacturer.

† Since febrile reactions in this age group are common following influenza vaccination, an antipyretic may be indicated.

INFLUENZA CHEMOPROPHYLAXIS—1968-69

During the past few years, amantadine hydrochloride, a virus chemoprophylactic, has been available. If taken before exposure, the drug is reported to prevent or modify illnesses caused by some strains of type A2 influenza virus. Preliminary laboratory tests by the manufacturer suggest that the drug is active against the Hong Kong variant of A2 influenza virus in eggs, and might be applicable to prevention of human disease.

In weighing the possible usefulness of amantadine hydrochloride for influenza control in 1968-69, several problems must be recognized. There has been no satisfactory study of the drug's effectiveness in the general population under conditions of natural exposure. Furthermore, in order to be protective the drug must be administered before exposure, and that requirement necessitates giving it regularly throughout the entire period of possible influenza infection. Finally, the drug's acknowledged side effects are commonest in the older persons for whom protection is especially important.

In view of these limitations, therefore, amantadine hydrochloride is not presently recommended as a public health measure for community control of influenza or as a substitute for influenza vaccine immoprophylaxis.

(The above recommendation was published in MMWR *for week ending September 28, 1968. As of mid-October, PHS officials believed that it would be two or three months before the Aichi vaccine would be available. Even then it was expected to be in critically short supply.—I.S.D.H.)*

Relationship Between Chills and Angina Pectoris

Exposure to cold is said to aggravate angina pectoris by increasing resistance to blood flow through small peripheral vessels. Increased peripheral resistance raises the blood pressure against which the already oxygen-hungry heart muscle must work to supply the same volume of blood. This may cause or aggravate chest pains resulting from exertion or other factors in patients with chronic coronary insufficiency.

A study reported by Drs. Morris Stampfer, Stephen Epstein, George Heiser, Robert Goldstein and Eugene Braunwald, of the National Heart Institute, at the American Heart Association's meeting in Bal Harbour, Florida, November 24, included six coronary patients and five subjects without any coronary symptoms. All 11 were studied both at rest and during mild exercise in a 76° and in a 59°F. environment. Although heart output and heart rate were not changed as a result of the lower temperature alone, three of the coronary patients who had felt no pain while exercising in the warm environment incurred angina with the same level of exercise in the cold.

Cardiology texts have suggested that *the cold-induced increase in heart output* increases the work—and thus the painful need for oxygen—of the heart muscle. But since a cold environment causes an increase in total peripheral resistance but not in the cardiac output, it probably is *the increased resistance to flow* and the consequent increase in blood pressure induced by cold which heightens the myocardial oxygen demand. If the coronary blood supply is insufficient, this factor might well precipitate or intensify any attack of chest pain.

Morbidity Report for Month of October, 1968

Diseases	Oct. 1968	Sept. 1968	Oct. 1967	Most Cases Reported From These Counties
Amebiasis	0	0	0	
Aseptic meningitis	0	3	0	
Brucellosis	0	7	3	
Chancroid	0	0	0	
Chickenpox	360	63	211	Dubuque, Hamilton, O'Brien, Warren
Diphtheria	0	0	0	
Encephalitis (type unspec.)	1	2	1	Des Moines
Food intoxication	0	0	0	
Gonorrhea	288	306	364	Urban centers
Histoplasmosis	0	6	3	
Infectious hepatitis	27	31	19	Scattered
Influenza	0	0	0	
Malaria	1	1	0	Jasper
Measles	5	1	11	Bremer, Buena Vista. Fremont
Meningitis, H. influenzal	0	0	2	
Meningitis (type unspec.)	1	4	3	Scott
Meningococcal meningitis	1	1	1	Johnson
Mumps	363	165	575	Scattered
Poliomyelitis	0	1	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Rabies in animals	4	10	8	Clay, Henry, Humbolt, Kossuth
Salmonellosis	12	10	11	Carroll, Dubuque, Linn, Polk, Scott
Scarlet fever	416	327	518	Jefferson, Johnson
Shigellosis	12	3	5	Johnson, Polk
Smallpox	0	0	0	
Syphilis	46	73	63	Scattered
Tetanus	0	2	0	
Tuberculosis	8	7	6	Black Hawk, Jones, Lee, Mitchell, Polk, Scott
Typhoid fever	0	1	0	
Whooping cough	2	3	8	Buchanan, Winneshiek


Knee-deep

in osteoarthritic pain

If aspirin doesn't help, move in with Tandearil.

The trial period is brief: 1 week. Try one tablet q.i.d. at first. Tandearil usually starts working within 3 to 4 days. When response occurs, as little as 1 or 2 tablets daily may hold back pain and stiffness, and increase joint motion.

On the next page is a summary of adverse reactions, contraindications, warning and precautions.

Tandearil.
It can help get his mind off his knee.

Please review full Prescribing Information carefully before prescribing.

For osteoarthritic knees, spines, shoulders, hips, etc.:

Tandearil®
oxyphenbutazone

Tandearil, oxyphenbutazone:
For brief summary see next page.

Geigy

TA-6006



Tandearil®
oxyphenbutazone

Contraindications: Edema; danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently.

Warning: This drug is an analog of phenylbutazone; sensitive patients may be cross-reactive. If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy, and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. The patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions, black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face may be minimized by withholding dietary salt, reduction in dosage or use of diuretics. In elderly patients and in those with hypertension, the drug should be discontinued with the appearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediately after meals or with milk to minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative dermatitis, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), or a generalized allergic reaction similar to a serum sickness syndrome may occur and require permanent withdrawal of medication. Agranulocytosis can occur suddenly in spite of regular, repeated normal white counts. Stomatitis, salivary gland enlargement, vomiting, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported. While not definitely attributable to the drug, a causal relationship cannot be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Osteoarthritis: Initial: 3 to 6 tablets daily in divided doses. Usually unnecessary to exceed 4 tablets daily. A trial period of one week is considered adequate to determine the therapeutic effect of the drug. Maintenance: Effective level often achieved with 1 or 2 tablets daily, should not exceed 4 tablets daily.

In selecting appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response.

Availability: Tan, round, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

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Woman's Auxiliary News

Rostrum Ramblings

Now comes the time of pause in our usual activities for the season of joy and good will when we pay reverent respect to that humble Birthday of so many years ago. Through all the turbulent centuries since, the message of peace and hope has shone with all the steady brightness of that first great star. I hope you and your families can be together, in health and warmth, for a most Merry Christmas. I hope, too, that the new year will bless you with happiness and the fulfillment of your dreams. Have a Joyous Holiday Season and the best of all years in the new one to come.

—Mrs. James F. (Lenor) Bishop

Roundup on the IMS Ranch

Even though we didn't exactly "ride 'em cowgirls," the costumes were colorful and the chuckwagon buffet was delicious at the Roundup in Des Moines on October 22, 1968. Mrs. D. W. Coughlan announced the morning program on Communications and Leadership, and our first speaker was Mr. Guy Koenigsberger, director of promotion for KRNT and KRNT-TV. His address was packed with information to aid us in our presentations on those media. We learned how to dress, sit, speak, etc., as well as the best possible way to communicate ideas to the news media in order to get the best cooperation from them.

Miss Danora Waterhouse, from the Polk County Extension Service, made us think a bit with her "Young People Communicate in 1968." We definitely should take time to listen to our young people and digest what they are trying to tell us. Too often we think it is of no importance and literally "turn our ears off." Her presentation was followed by the "Rx for Readable Writing" by Mr. James Autry, of Meredith Corporation. He recommended a paperback book, "Elements of Style" by William Strunk, to follow in achieving the preferred style in putting ideas across on paper.

After a short movie, "Alcoholism," shown by Mrs. M. D. Hayden, Mental Health chairman, we stopped for a buzz session and our buffet. Introductions after luncheon were given by Mrs. P. H. Tenney, and the theme was "Why Accent on Youth?"

Miss Jean Purdy, director of clinical services for the State Training School for Girls, Mitchellville, gave us much food for thought. We should be alert to what is going on in our own communities with the juveniles and probation officers, and to the ways in which we could be helpful. "Health Careers and the Manpower Shortage" was the topic covered by Mr. Dale F. Peterson, research coordinator for the Program in Health Occupations Education, the Division of Medical Affairs of the University of Iowa. We are all aware of this problem, and must try to help alleviate the shortage in every possible way.

The last item on the program was a film "Narcotics—Why Not?," shown by Mrs. Hayden. The ever-increasing problem of drugs is everywhere, although each of us prefers to think it is not in her community and just turns her head the other way. Learn how, why and when drugs are being used by our youth. Contact Mrs. Hayden, 1125 W. Willow Street, Cherokee, Iowa 51012, for information on the films and other material.

It was one of the best workshops we have had so far, and we hope more of you will be inspired to come next year.

—Mrs. Rollin M. (Jane) Perkins

Around the Hawkeye State

Black Hawk County

The Woman's Auxiliary to the Black Hawk County Medical Society has had a very rewarding experience selling the Doctor's Wife Rose, developed in Oregon and promoted and marketed by the Woman's Auxiliary to the Oregon Medical Society. Originally, our interest was aroused by Charlene Conklin, our immediate past-president, who called our attention to the lovely rose on the cover of the May, 1967, issue of MD'S WIFE. We were impressed by the results of its sale in providing playgrounds for retarded children in Oregon. We in Black Hawk County had already taken a vital interest in our Black Hawk County Development Center, a new and outstanding school for exceptional persons. Our Community Health Service chairman, Mrs. Rachel Miller, and her assistant, Mrs. Bobbie Thornton, worked closely with the Center's director to deter-

mine some immediate needs, and therefore had earmarked the $1,800.00 earned from our Annual Medical Charity Ball for a health room (nurse's station) and other equipment. We then saw an additional need for special equipment to provide these children with exercise and outdoor activity.

The Rose Chairmen, Mrs. Betty Kestel and Mrs. Sue Gerken, did an excellent job by enthusiastically promoting sales (They contacted Auxiliary members and members of other interested groups to let them know that the new rose was available.), receiving shipments, storing the roses in their garages and seeing that the deliveries were made. They received a great deal of help from other Auxiliary members.

All felt it was a worthwhile project. The rose bushes yield elegant blooms from mid-June to frost. The bloom is large and deep, one to a stem and several stems yield blooms at once. The color is a deep pink, the edges of which turn a velvety burgundy when allowed to mature. We don't think we had any dissatisfied purchasers. The orders and shipments for the 130 roses sold went very smoothly, and the $260.00 profit seemed well worth the effort. We look forward to next year when we anticipate selling many more Doctor's Wife Roses to beautify our gardens, home arrangements and flower shows.

—MRS. JOHN G. (JUDI) NAPIER

Polk County

The results of the annual Homebound Handcraft Sale of the Easter Seal Society of Iowa, sponsored by the Medical Auxiliary of Polk County, were most gratifying, netting $1,429.71. The sale was held October 7-12, inclusive, in the foyer of Younkers Tearoom. The full sale price for each article goes to the person who made it.

Our sincere appreciation to Mrs. Robert Reed, chairman, and Mrs. James Ryan, co-chairman, and to all the Auxiliary members who gave of their time and efforts in making this very worthwhile project a success.

Members of the Polk County Medical Society have been solicited by the Woman's Auxiliary to purchase Holiday Greeting Cards. The sale of these cards, beautifully designed and bearing the names of all who purchase them, is the main money making project of the Auxiliary this year. Proceeds are allocated to organizations providing for the advancement of medicine and health education. The cards are addressed, stamped and mailed by the Auxiliary. Those of you who have not ordered your Holiday Greeting Cards, should do so at once by calling Mrs. Boynton T. Woodburn—276-6696.

A panel discussion of allergy, on the KDPS-TV program "Medical Forum of the Air," took place on Monday evening October 7. Auxiliary members assisting were Mrs. George Caudill, Mrs. Robert R. Updegraff, Mrs. Harold E. Eklund and Mrs. Charles Hull.

Mental Health

Guidelines for better Mental Health programs at our Medical Auxiliary meetings were given at the St. Louis regional workshop. The accent during the coming year will again be on youth. One of the new package programs that will be available soon is on alcohol, which is considered the nation's number-one drug abuse problem. The majority of adults drink. How are we going to guide our youth? Our National Mental Health Chairman suggests that you try a P E R T program about mental health in your community.

P—for prevention, is the goal of all efforts.

E—is for education, an area in which Auxiliaries can be most effective. The new package program, "The Use and Not Abuse of Alcohol," takes the approach of teaching the facts—not preaching—about the nature of alcohol, its uses, and the dangers when the drug is abused.

R—for research, can be supported with money and personal interest.

T—treatment. The attitude that alcoholics are derelicts is changing to the realization that alcoholics are treatable patients who deserve medical care.

There are other program materials available. Use one that you feel would be of value to your community. Some other program topics suggested in St. Louis are Mental Health of Children, Suicide Prevention, Help for the Mentally Retarded, Drugs, and the new "Woman's Worry Clinic." Have at least one mental health program each year.

A bit of mental health can be read into every Auxiliary activity. A smile, a kind word, or the extension of a helping hand when needed is allways good psychotherapy—both for the donor and for the recipient.

—MRS. M. D. HAYDEN
Mental Health Chairman

WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

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President-Elect—Mrs. D. W. Coughlan, 5410 Grand Avenue, Des Moines 50312

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Assistant Editor—Mrs. D. A. Mater, 302 South Fourth Street, Knoxville 50138



Personals



Dr. Paul Ferguson, of Lake City, has been elected to the board of directors of the American Cancer Society, Iowa Division. Dr. Ferguson assumed his duties on the board at the annual meeting of the Society held in Des Moines on November 2.

Dr. James Kimball has joined the staff of the Clarke County Medical Clinic in Osceola. Dr. Kimball was discharged from military service on September 23 and has been working at the Clinic part time since April. He is a graduate of the U. of I. College of Medicine and interned at Walter Reed General Hospital, in Washington, D. C., before entering the Army. Following duty with the 25th Infantry Division at Scofield Barracks in Hawaii, Dr. Kimball served for a year in Vietnam with the 85th Evacuation Hospital. Upon his return to the United States, he was stationed at Fitzsimons Hospital, in Denver, and later was assigned to the Des Moines induction center prior to his discharge.

Dr. E. L. Wiemers, chief of outpatient care at the Mental Health Institute in Cherokee, was one of the participants in a program on parent-child communication held on Monday, October 28 at the Catholic Gymnasium in Pocahontas. The program consisted of a panel discussion on the problems of communication, and it was followed by questions from the audience and a discussion.

Dr. Montague S. Lawrence, a profesor of thoracic surgery at the U. of I. Hospitals, spoke at the annual fall meeting of the Northwest Division of the Iowa Heart Association, held in Le-Mars on Tuesday, October 29. **Dr. F. B. O'Leary,** of Osceola, president of the association, presided at the meeting. Dr. Lawrence spoke on "Current Trends in Cardiovascular Surgery" and on heart transplants.

The Calhoun County Board of Supervisors has adopted a cooperative plan to handle the position of county medical examiner without hardship to any one physician. **Dr. J. Charles Comstock,** of Lake City, has been appointed medical examiner for the county. **Dr. Charles Wilson,** of Manson, and **Dr. Dale L. Christiansen,** of Lake City, have been named as deputy examiners. Dr. Wilson will serve the northern half of the county and Dr. Christiansen, the southern half. Both will work under the direction of Dr. Comstock.

Dr. Cecil Seibert, a Waterloo physician and president of the Iowa Medical Society, spoke at the October 29 meeting of the Waterloo-Cedar Falls Panhellenic Association. His topic was "The Future of Medicine in Iowa."

Dr. Samuel P. Leinbach, of Belmond, was installed as president of the North Central Medical Conference, on Sunday, November 3, in St. Paul, Minnesota. The North Central Medical Conference is composed of the medical societies of Iowa, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin. Each year physician representatives meet to exchange information. Dr. Leinbach is a past-president of the Iowa Medical Society.

Dr. Heinz S. Jacobi, formerly of New Hampton, has joined **Dr. Russell S. Gerard, II** in the practice of surgery in Waterloo.

Dr. Dennis Nugent, a Sheldon surgeon, and **Dr. Paul Boone,** a Paullina general practitioner, have joined the staff of the Hartley Community Memorial Hospital in Hartley. Both physicians are graduates of the U. of I. College of Medicine, and only recently began practice in their respective towns. Dr. Nugent is also to serve the Community Hospital in Sibley.

Dr. Robert Tidrick, chairman of the Department of Surgery of University Hospitals in Iowa City,

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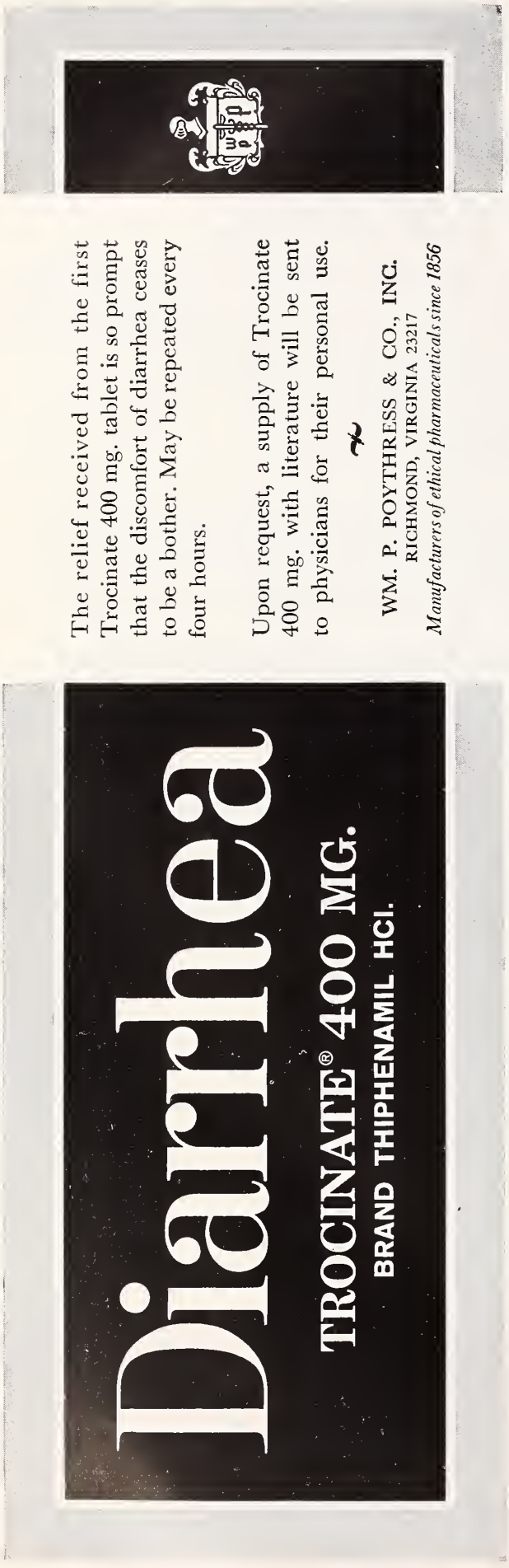
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and **Dr. John Powers**, of Estherville, president of the Emmet County Medical Society, conducted a 1½-day course in initial emergency care and transportaion of the sick and injured at the VFW Hall in Estherville on November 12 and 13. Approximately 100 persons attended the meeting. Participants included paramedical emergency-unit personnel, law enforcement officers, fire fighters and other interested persons. Sponsors of the conference included the Iowa State Department of Health, Department of Surgery, U. of I. College of Medicine, Iowa Medical Society, Emmet County Medical Society, State Committee on Trauma of the American College of Surgeons, and Iowa Lakes Community College.

Five Atlantic physicians moved into the new 54-room Atlantic Medical Center on November 2. They are **Drs. Dwain Wilcox, Millard Peterson, J. E. Moriarity, John Weresh,** and **Einer Juel.** The center, located adjacent to the new Cass County Memorial Hospital, contains 29 examining rooms, and also has a full-time pharmacist as well as the physicians' regular staff.

Dr. C. E. Broderick, of Cherokee, has announced his retirement. Dr. Broderick has practiced medicine in Cherokee since May 1, 1925. Before coming to Cherokee he was in general practice in Newton and then took graduate work at the University of Vienna in eye, ear, nose and throat. He is a 1918 graduate of the U. of I. and was honored in April, 1968, as a 50-year member of the Iowa Medical Society. Dr. Broderick was not able to return to practice after undergoing surgery at Rochester, Minnesota, to implant an eight-inch-long Dacron tube to repair an aneurysm of the thoracic aorta. His plans following retirement are indefinite.

Dr. K. M. Johannsen, of Spencer, recently conducted two meetings on the technics of cardiopulmonary resuscitation. The first meeting was held at the Buena Vista County Hospital, in Storm Lake, on November 7, and the second at Sioux Valley Memorial Hospital, in Cherokee, on November 19. Physicians, nurses and hospital administrators from Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, and Sac counties attended. The programs were sponsored by the Northwestern Division of the Iowa Heart Association.

Dr. E. V. Riedesel, of Wheatland, was honored on November 9 for 47 years of service to that community. A graduate of the U. of I. College of Medicine, he established his practice at Wheatland in 1921.

At a sectional meeting of the American College of Surgeons to be held in Omaha, February 3-5, **Dr. Johann L. Ehrenhaft**, a professor of thoracic surgery at the U. of I., will speak on "Treatment of Empyema" and on "Pneumonectomy." **Dr. Carroll B. Larson,** head of orthopedic surgery at the U. of I., will moderate a panel discussion on "Fractures and Dislocations of the Upper Extremities" and will speak on "Cup Arthroplasty of the Hip." **Dr. Rubin H. Flocks,** head of urology at the U. of I., will discuss "Carcinoma of the Prostate."

Dr. Frank C. Coleman, of Tampa, Florida, and formerly of Des Moines, was installed as president of the American Association of Blood Banks, at the 21st annual meeting of that organization held on October 28-31 in Washington, D. C.

Dr. Edson L. Forker, assistant professor both of physiology and biophysics and of internal medicine at the U. of I. College of Medicine, has been named recipient of a Research Career Devlopment Award given by the U. S. Public Health Service. He conducts research in the physiology of the liver, and he was selected for the award in a nationwide competition conducted by the National Institute of Arthritis and Metabolic Disease.

A scientific exhibit from the U. of I. Department of Ophthalmology won first prize in national exhibit competition at a meeting of the American Academy of Ophthalmology and Otolaryngology held in Chicago on October 30. The exhibit was entitled, "Pathology of the Eye in Stereoscopic Slit Lamp Biomicrography." Research depicted in the exhibit had been done by **Dr. A. E. Braley**, a professor; **Dr. Robert C. Watzke**, an associate professor; and **Messrs. Lee Allen** and **Ogden Frazier**, both associates.

A DES MOINES REGISTER reporter, **Nick Kotz**, was the principal speaker at the November 6 dinner meeting of the Johnson County Medical Society held at the Oakdale Hospital in Oakdale. Mr. Kotz's subject was "The Election—What Happened, and Why."

Dr. Craig D. Ellyson, of Waterloo, was the guest speaker at a meeting of the Main Street Parent Education Study Group, in Waterloo on Tuesday, October 29. Dr. Ellyson's topic was "How to Start Sex Education for the Pre-School Child."

Dr. Gene M. Kuehn, a Mason City physician, discussed sex education at a meeting of the school nurses attending the Iowa State Education Association's convention held in Des Moines on October 18 and 19.

Dr. Norman Nelson, of Lamoni, was the guest speaker at a meeting of the Ringgold County Hospital Auxiliary held on October 21 in Mt. Ayr. Dr. Nelson, who is in charge of the hospital's coronary care unit, spoke on coronary heart disease and its diagnosis.

Dr. F. N. Cole, of Iowa Falls, has announced that he is retiring after 36 years of practice in Iowa Falls. Dr. Cole has been in Ellsworth Hospital for treatment of a heart condition. Dr. Cole came to Iowa Falls in 1932, and during this time he has been city health officer for 32 years, has assisted in the planning of the Ellsworth Hospital, which was built in 1936, has served on the library board for 30 years, has been a member of the school board, of the Ellsworth College board of trustees and of the City Planning Commission, and has been a medical examiner for Selective Service. He has also been a director of the Iowa Falls Chamber of Commerce, and is a past-president of the Lions Club, a past-president of the Hardin County Medical Society, and a member of the Iowa Medical Society and the American Medical Association. Dr. Cole received the Community Service Award in Iowa Falls in 1966.

The sixth edition of COMMUNICABLE AND INFECTIOUS DISEASES, a textbook edited by **Dr. Franklin H. Top, Sr.**, professor and head of preventive medicine and environmental health at the U. of I., has been published by the C. V. Mosby Co., St. Louis. The 775-page book is intended as a text or reference volume for all persons whose professional duties necessitate contact with certain communicable diseases or infestations. The first edition was published in 1941. U. of I. contributors to the book are **Drs. Irving H. Borts, A. E. Braley, Henry E. Hamilton, Kenneth MacDonald, Christian E. Radcliffe** and **Ian M. Smith,** and **William F. McCulloch,** a former faculty member. Another Iowa contributor is **Dr. Herman C. Ellinghausen,** research microbiologist at the National Animal Disease Laboratory at Ames. Dr. Top's son, **Dr. Franklin H. Top, Jr.**, assisted in revising two chapters and edited the first five general chapters and all chapters on viral disease. He is a staff member of the Department of Virology at the Walter Reed Army Institute of Research, in Washington, D. C.

At the annual meeting of the American Academy of Pediatrics held at the Palmer House in

Chicago on October 22, **Dr. M. E. Alberts**, a Des Moines pediatrician, was re-elected president of the Pediatrics History Club. Dr. Alberts attended the Chicago meeting.

Dr. Barry J. Anson, research professor of otolaryngology and maxillofacial surgery at the U. of I., was the guest of honor at the annual meeting of the American Academy of Ophthalmology and Otolaryngology held in Chicago on October 27-November 1. Following the presidential address, Dr. Anson spoke on "The Labyrinths and Their Capsule in Health and Disease." Papers presented by U. of I. otolaryngology faculty members were as follows: "A Contribution to the Management of Temporal Pain Resulting from Mandibular Joint Dysfunction," by **Drs. Leslie Bernstein**, associate professor, and **David M. Paul**, clinical associate professor of rehabilitation; "The Primate Larynx: A Comparative Physiological Study of Intrinsic Muscles," by **Dr. Malcolm H. Hast**, a research assistant professor; "Pharmacologic Properties of Labyrinthine Drugs," by **Dr. James R. Leonard**, an assistant professor, and **Dr. Richard Lawrence**, a senior resident. Conducting educational courses were Drs. Anson, Bernstein, **Ward B. Litton, Brian F. McCabe, William H. Olin, Scott N. Reger**, and **James W. Schweiger. Mr. Paul W. Ver Vais**, head of medical illustrations, also participated.

Seven members of the Department of Ophthalmology participated in the Academy program. **Dr. Frederick C. Blodi**, professor and head, spoke on "Ligneous Conjunctivitis" and discussed a paper on "Pap Smear of Conjunctiva," **Dr. Hermann M. Burian**, a professor, discussed a paper on "The Use of Electro-Diagnostic Methods in Blind Children" and presented a course on "Slit Lamp Gonioscopy in Congenital Anomalies." **Dr. Mansour F. Armaly**, a professor, spoke on "The Optic Nerve and the Glaucomatous Cup." **Dr. Bruce E. Spivey**, an assistant professor, reported on "The Iowa Implant: A 10-Year Evaluation of Techniques and Results." A scientific exhibit on "Stereoscopic Fundus Photography" was presented by **Dr. Robert C. Watzke**, an associate professor, and **Messrs. Lee Allen** and **Ogden Frazier**, both associates.

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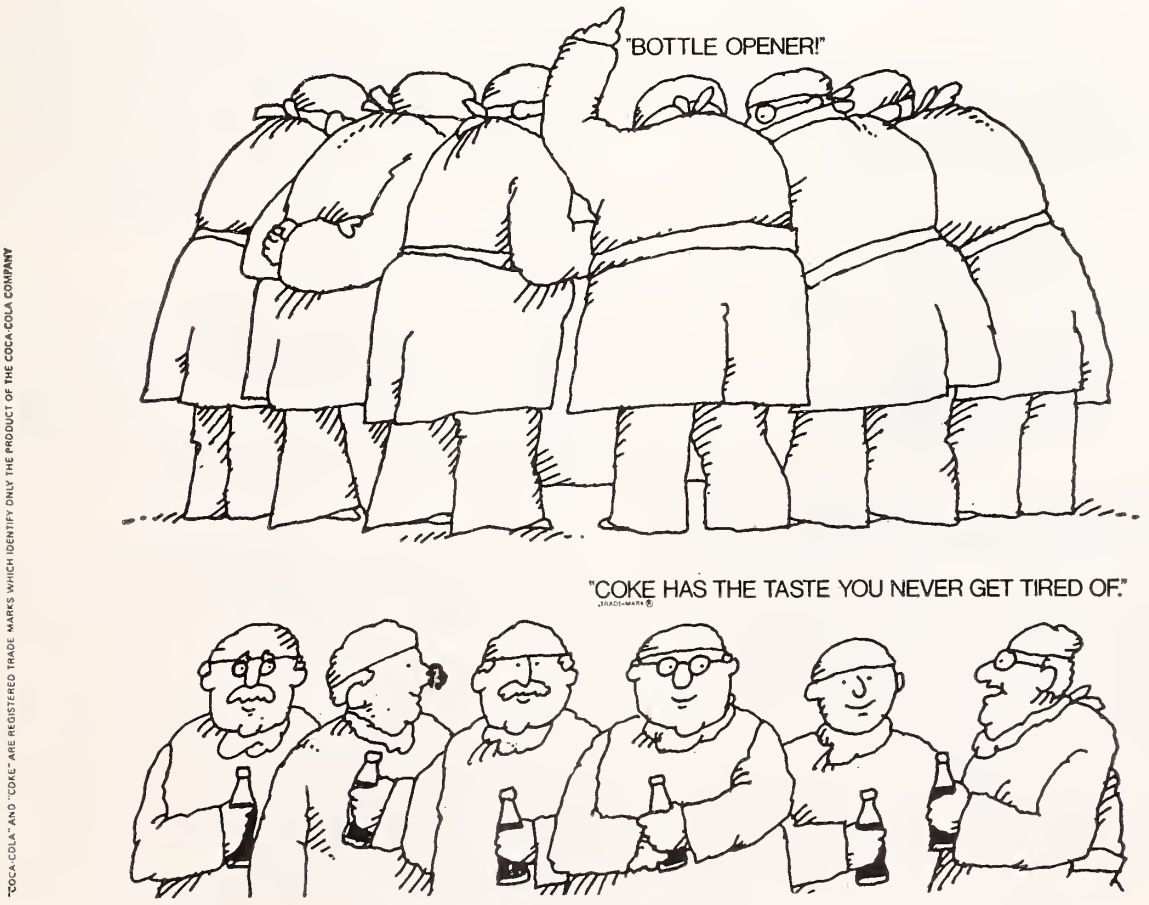
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have contributed to a new book, SYNOPSIS OF SURGERY, which has just been published by the C. V. Mosby Co., St. Louis. Editors of the 1,091-page volume are **Dr. Richard D. Liechty**, an associate professor, and **Dr. Robert T. Soper**, a professor in the U. of I. Department of Surgery. Contributors to the book, in addition to Drs. Liechty and Soper, represent six departments in the College of Medicine. They are **Drs. Joseph A. Buckwalter, David W. Furnas, Edward W. Green** (now of Indio, Calif.), **Richard L. Lawton, Edward E. Mason, Samuel D. Porter** (Mason City) and **Sidney E. Ziffren** from the Department of Surgery; **Drs. Reginald R. Cooper, Adrian E. Flatt,** and **Carroll B. Larson,** from the Department of Orthopedics; **Dr. Rubin H. Flocks,** from the Department of Urology; **Dr. William K. Hamilton** (now of San Francisco) from the Department of Anethesia; **Drs. Robert E. Hodges** and **Ian M. Smith,** from the Department of Internal Medicine and **Dr. Brian F. McCabe** from the Department of Otolaryngology. **Dr. John T. Keller**, an assistant professor of radiology, helped select and evaluate many of the radiographs used as illustrations, and **Dr. John C. Hoak**, an associate professor of internal medicine, reviewed the chapter on blood coagulation and transfusion therapy.

Dr. Dale Weber, of Clinton, was the guest speaker at the November 4 meeting of the Albany, Illinois, Junior Women's Club at the United Methodist Church there. Dr. Weber showed slides of his work with **Dr. Albert Schweitzer** in Africa.

Dr. John R. Scheibe, of Bloomfield, attended the national meeting of Blue Shield, held during the week of October 31, in Phoenix, Arizona. Dr. Scheibe is a member of the Iowa board of directors of Blue Shield.

Dr. William A. Seidler, Jr., of Jamaica, was named president-elect of the Iowa Chapter of the American Academy of General Practice, at the annual meeting of that organization held in Des Moines on October 18-19. Dr. Seidler is a past

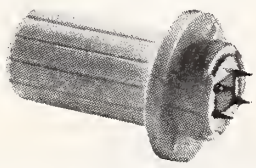




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president of the Guthrie County Medical Society. **Dr. H. E. Rudersdorf**, of Sioux City, was elevated to the post of president, succeeding **Dr. Lee E. Rosebrook** of Ames. Other new officers are **Dr. Harold Moessner**, of Amana, vice-president and **Dr. George A. Kern, Jr.**, of Des Moines, secretary-treasurer. New members of the board of directors installed for three-year terms were **Dr. J. Frederick Roules**, of Mediapolis, and **Dr. Wendel W. Taylor**, of Sheffield. **Dr. William A. Castles**, of Dallas Center, was installed as a delegate, and **Dr. Raymond F. Frech**, of Newton, was installed as an alternate, both for two-year terms.

Some 70 scientists from seven nations met on the U. of I. campus November 1-3, for a workshop on "Hydrodynamics of Micturition." The workshop was sponsored by the National Research Council—National Academy of Sciences in cooperation with the U. of I. Department of Urology.

Dr. Lewis E. January, the immediate past-president of the American Heart Association and a professor of internal medicine at the University of Iowa, was interviewed by a reporter for the U. OF I. SPECTATOR on his return from a conference of heart authorities in Geneva, Switzerland. "Medical newsmen throughout the world," he said, "have outdone themselves to kindle the notion that heart transplantation promises a new life for man. The efforts to bring a message of hope have had a cruel effect upon thousands of desperately ill patients throughout the world by suggesting that doctors can deliver more than is yet possible. Even if heart transplantation ultimately becomes really practical and has long-term predictability, it will remain peripheral to the main problem, namely the prevention of the major forms of heart disease."

On October 18, **Dr. Robert E. Hodges**, a professor of internal medicine at the U. of I., served as chairman of a symposium on "Diet and Heart Disease" at the annual meeting of the American Dietetic Society, in San Francisco.

Dr. R. J. Fisch has moved his offices into the recently-constructed addition to the Hagen and Ihrke Building, in LeMars.

The Black Hawk County Medical Society was one of the sponsors of the Sixth Annual Science Symposium, on November 14-15, at the University of Northern Iowa, in Cedar Falls. More than 1,000 high school science students were expected to attend. The students competed for college scholarships by taking a comprehensive two-hour test

in their choice of physics, biology, chemistry or earth science, but their prior scholastic records were taken into account by the judges. The lectures that the students attended dealt with nuclear physics, geology, behavioral biology and entomology.

At a meeting of the Charles City Kiwanis Club on October 16, **Dr. Werner P. Pelz** outlined plans for a medical and dental clinic.

Dr. Dale R. Onnen spoke on "Ancient Medicine" to an audience of 30 boys at the October 13 meeting of the Holy Trinity Lutheran League, in Newton. He compared it with current medical knowledge.

Dr. John W. Mathiasen, of Council Bluffs, has begun a two-year term as president of the Creighton Alumni. The installation, on October 18, was attended by 150 people.

Dr. John Ritter, who practiced in Ottumwa from 1958 to 1963, and since then has been working at the Appalachian Regional Hospital in Harlan, Kentucky, is completing a two-month tour of duty with the AMA Volunteer Physicians for Vietnam program. He plans to continue around the world, visiting friends in Pakistan, Italy and Ireland before returning to this country.

Dr. S. M. Haugland is one of a group of three men who are considering the construction of a building that would accommodate two physicians and two dentists in Lake Mills. Their decision hinges on the possible sale by Dr. Haugland and by **David Randall, D.D.S.**, of their present quarters. Each is seeking an associate.

A Davenport physician, **Dr. J. F. Collins**, conducted one of the Pre Cana sessions, in October, at St. Ambrose College, there. Pre Cana courses are designed to help prepare young people for marriage. They are open to those who are shortly to be married and to couples who have been married for a year or less.

On October 15 the Muscatine City Council was asked to consider hiring a health administrator in cooperation with the city and county governments of Muscatine, Scott, Cedar and Louisa Counties. **Dr. V. W. Swayze**, chairman of the Muscatine County Board of Health, reported that Johnson County presently has a health administrator who coordinates municipal and county health programs, and that an area with a population of 50,000 is regarded as the minimum and one with 250,000 is the maximum for such an official to manage. Both Scott and Cedar Counties had expressed interest, he said. The Muscatine County Board of Supervisors was expected to appoint a committee to study the proposal.

Dr. Alfred Healy, an assistant professor of pediatrics at the U. of I., was one of the guest speakers at a symposium on birth defects held on November 8 at the Sheraton-Warrior Motor Inn, in Sioux City. The symposium was sponsored by District 1, Iowa Nurses Association, and the Woodbury County Chapter of the March of Dimes.

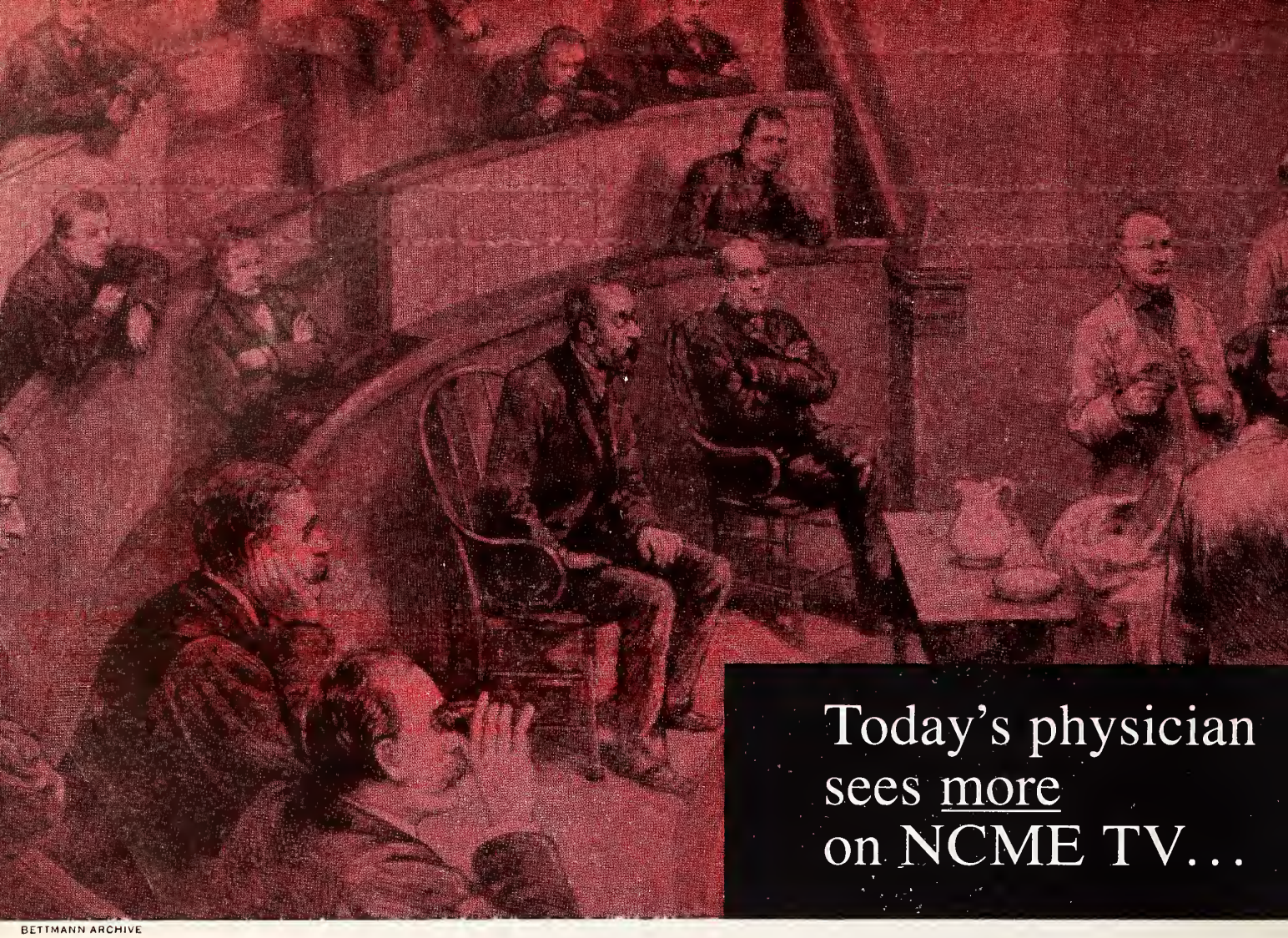
Dr. Scott Linge, of Fayette, was elected to the Board of Trustees of Upper Iowa College at a special meeting held on November 5. Dr. Linge was subsequently chosen to serve as secretary to the Board.

Dr. Duane D. Warden, of Council Bluffs, has been elected to the Board of Directors of the American Cancer Society, Iowa Division, Inc. Dr. Warden is currently serving as vice-chairman of the Pottawattamie County Cancer Chapter.

Dr. William Steinbeck, of Keystone, received a five-year citation for his work as educational chairman of the Benton County Cancer Chapter at the annual meeting of the American Cancer Society, Iowa Division, Inc., held in Des Moines on November 2.

At the annual meeting of the Association of Life Insurance Directors of America held in St. Louis on October 28-30, **Dr. Fred Dinkler**, a medical director of the Bankers Life, was elected to a second three-year term on the board of Life Insurance Medicine.

Mr. Lee Allen, an associate in the U. of I. Department of Ophthalmology, has been elected president of the American Society of Ocularists, a group of highly skilled artisans who fabricate and fit artificial eyes. At a meeting of the Eye Bank Association of America, also held in Chicago recently, he was awarded a plaque in appreciation of his "artistic talent and the generous service" he has given to that organization. Mr. Allen designed a pin which can be worn by persons who have willed their eyes to be used for corneal transplants upon their deaths. The Eye Bank Association also honored him for developing a device used by eye surgeons to hold the donor cornea while the section needed for the operation is removed. He has been on the staff of the Department of Ophthalmology since 1937. He is co-author, with **Dr. F. C. Blodi**, professor and head of ophthalmology, of a widely-acclaimed atlas of stereoscopic photographs of the eye, and he is now collaborating on two other books.



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The guest lecturer at the Sixth Annual Seminar on Religion and Mental Health at the Knoxville VA Hospital on October 10 was **Dr. Howard P. Rome,** a senior consultant in psychiatry at the Mayo Clinic. His topic was "Religious Factors in Mental Illness From a Doctor's Point of View."

Dr. Gene M. Kuehn, of Mason City, addressed the Women's Club in Rockford, October 10, on family relationships and the need for sex education in the schools. Dr. Kuehn is an obstetrician and gynecologist.

A three-part seminar on cardiology for physicians and nurses in a six-county area of northeast Iowa was conducted on successive Thursdays, October 10, 17 and 24, under the joint sponsorship of the Iowa Heart Association and District 14 of the Iowa Nurses' Association. For the first meeting, at the Cliff House in Decorah, the speakers were **Dr. W. O. Rieke,** head of anatomy, and **Dr. Michael E. Korns,** an assistant professor of pathology, from the U. of I. College of Medicine. At the second program, in the Good Samaritan Home in Waukon, **Dr. E. O. Theilen,** a professor of internal medicine at the U. of I., discussed the diagnosis and treatment of arrhythmias, and **Dr. L. W. Swanson,** a Mason City internist, spoke on the aggressive management of cardiac arrest and coronary care units. At the third session, in St. Paul's Lutheran Church, Postville, **Dr. Dave Funk,** chief of cardiology at the Iowa City VA Hospital, talked on congestive heart failure; **Dr. Donald McRaven,** a fellow in cardiology at University Hospitals, spoke on cardiogenic shock, and **Dr. Manuel Calvello,** another fellow in cardiology, discussed adrenergic receptors.

Dr. Robert B. Stickler, a Des Moines surgeon, has been elected to a three-year term on the Board of Directors of the University of Iowa Alumni Association. He received both his bachelor's and doctor's degrees from the U. of I.

Dr. J. G. Clapsaddle, a Life Member of the Iowa Medical Society, entered Heritage Home, in Bancroft, early in October as a resident. He practiced for many years in Burt.

Dr. Robert German, who recently completed his tour of duty with the U. S. Navy, took over the practice of **Dr. C. R. Sokol,** of State Center, for two weeks in October, while Dr. Sokol made a trip to California. Dr. German expects shortly to begin a residency in dermatology at the U. of I.

(More Personals on page 1279)

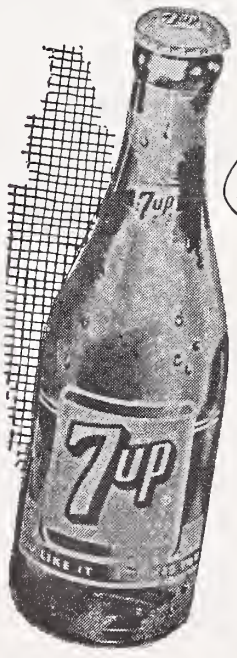




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Dr. Walter A. Anneberg, a Carroll obstetrician and gynecologist, is the general chairman of the fund-raising campaign for the St. Anthony Regional Hospital. The $6 million cost of the structure will be met by a $2.5 million loan, a $1 million federal grant, a funded depreciation of $1 million, and $1.5 million in gifts which Dr. Anneberg and his committee hope to secure.

On Sunday evening, October 13, **Dr. J. H. Faust,** of Manson, spoke to the congregation of the United Church of Christ, in Pomeroy, regarding his recent three months' service as a missionary doctor at a hospital in Mt. Silinda, Rhodesia.

Some Iowa physicians who know of **Dr. W. D. Paul** as the U. of I. team physician and, until his recent retirement, as a professor of physical medicine and rehabilitation there—not to mention his responsibilities in the Arthritis Foundation—may not be aware that he developed the combination that is marketed under the trade name Bufferin, and another that bears the trademark Rolaids. He of course received no payment for either of them, and he receives no compensation for his work with the athletes, according to an article in a recent issue of the IOWA ALUMNI REVIEW.

Deaths

Dr. Albert J. Joynt, 82, who until his retirement last year was Waterloo's oldest practicing physician, died on Tuesday, October 22, at Northwestern Community Hospital in Arlington Heights, Illinois. Dr. Joynt was a 1912 graduate of the U. of I. College of Medicine, and had practiced in Waterloo for almost 52 years.

Dr. Arthur W. Horst, 44, a general practitioner in Sioux City since 1954, died of amyloidosis at Methodist Hospital, in Rochester, Minnesota, on Sunday, October 20, after an illness of six weeks. Dr. Horst attended the University of Kentucky and graduated from Morningside College in Sioux City. He was a graduate of the U. of I. College of Medicine and interned at Broadlawns Hospital in Des Moines. He was a member of the Woodbury County Medical Society, Iowa Medical Society, American Medical Association, American Academy of General Practice and a staff member of three Sioux City hospitals. He had continued practicing until six weeks ago.

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Index to Volume LVIII • Numbers 1-12 • 1968

Abdominal aortic aneurysm, Surgical treatment of (Editorial) 959
(Abdominal pain, Dicumarol, shock) U. of I. College of Medicine Clinical Pathologic Conference No. 496 597
Acceleration of medical education carried to extremes? (Editorial) 57
Accident data, Physicians are asked to help gather 1090
Acetylsalicylic acid and its combination with other agents, C. L. Mitchell, Ph.D. 876
Advisory council on comprehensive health planning appointed 888
Air pollution control program established for Iowa 181
Alcohol antagonist, fast-acting 1077
Alcoholic, City of Washington's experience with 70
(Alcoholism, ascites, coma) U. of I. College of Mediine, Clinical Pathologic Conference No. 494 384
Alcoholism, Funds for fight against (Editorial) 1060
AMA posture on public comment 963
Ambulances, not helicopters, right for Iowa 872
Analysis of election results, David Broder 1219
Anderson, William R., M.D., F.A.C.O.G., Raymond G. Burnett, M.D., Hazards of amniocentesis 130
Anderson, William R., M.D., and Allan J. Levine, M.D., Contraceptive polyp: a diagnostic dilemma 585
Angiographic demonstration of bleeding site in acute gastrointestinal hemorrhage, Steven H. Cornell, M.D. . 364
Annual meeting, Iowa Medical Society, April 28-May 1 . 233
Annual refresher course for G.P.'s in Iowa City 69
Antibacterials in urinary infections (Editorial) 1167
Anti-clotting drug may help prevent atherosclerosis 470
Antihypertensive actions of diuretics (Editorial) 697
Antimetabolites in treatment of psoriasis (Editorial) 698
Arteriosclerosis may cause both gains and losses in auditory acuity 68
Aspects of developmental dyslexia, A. L. Benton, Ph.D., and A. L. Sahs, M.D. 377
Asthma, Deaths from (Editorial) 610
Automobile safety design, Further recommendations for. 934

Bandy, Morris, In memoriam 510
Bell's palsy (Editorial) 397
Bell, W. E., M.D., Dilantin, University Hospitals Drug Letter 403
Bennett, F. William, M.D., Francis J. Whelan, M.D., and William S. Moeller, M.D., Morning glory seed intoxication: a case report 946
Benton, A. L., Ph.D., and A. L. Sahs, M.D., Aspects of developmental dyslexia 377
Bill of rights for grandparents (Editorial) 503
Bills that people least like to pay (Editorial) 285
Birge, Richard F., M.D., Presidential address—American medicine indicted—a defense 665
Bleeding disorders in children: diagnosis and management, Andre D. Lascari, M.D. 831
Blome, G. C., M.D., K. E. Lister, M.D., H. L. Wormhoudt, M.D., and W. H. DeKraay, M.D., Evaluation of gastric resections for duodenal ulcer 268
Blue Shield, Relationship between organized medicine and, Alvin J. Ingram, M.D., ... 823
Body to medical science, Should you deed your 874
Broder, David, Analysis of election results 1219
Bruner, Julian M., M.D., Recent advances in the treatment of Dupuytren's disease 245
Brunk, S. Fred, M.D., Treatment of lymphomas with antineoplastic agents 1038
Bubble baths cause irritations of urinary tract in children 888
Burnett, Raymond G., M.D., and William R. Anderson, M.D., F.A.C.O.G., Hazards of amniocentesis 130

(Cancer of the cervix, radiation and chemotherapy, shock) U. of I. College of Medicine, Clinical Pathologic Conference No. 475 274
Carcinoma of the breast (Editorial) 56
Carcinoma of the ovary (Editorial) 1172
Cheng, Shu-Feng, M.D., and R. H. Flocks, M.D., Combination therapy for prostatic carcinoma, with special emphasis on the role of chemotherapy 125
(Chest pain, cholecystectomy, shock, hepatomegaly) U. of I. College of Medicine, Clinical Pathologic Conference No. 492 678
Child passengers in automobiles should wear seat belts, too 65
Children learn what they live 61
Cholesterol-lowering agents, Donald L. Warkentin, M.D., University Hospitals Drug Letter 1067
Cholera is again a possibility 65
Cholecystostomy (Editorial) 1170
Chronic respiratory disease treatment center 183
City of Washington's experience with the alcoholic 70
Clinicopathologic Conference, Mercy Hospital, Des Moines (fatal aplastic anemia following viral hepatitis) 948
Clinical Pathologic Conferences, U. of I. College of Medicine, 43 (No. 489), 138 (No. 491), 274 (No. 475), 384 (No. 494), 490 (No. 495), 597 (No. 496), 678 (No. 492), 854 (No. 500), 1042 (No. 501), 1153 (No. 498)
Code of cooperation with physicians and hospital personnel has been updated, In the Public Interest . facing p. 874
College student drug-takers, Motivation of (Editorial) .. 955
Combination therapy for prostatic carcinoma, with special emphasis on the role of chemotherapy, R. H. Flocks, M.D., and Shu-Feng Cheng, M.D. 125
Comfortable words 273
Coming Meetings 7, 111, 219, 343, 451, 563, 662, 815, 915, 1009, 1127, 1225
Complications following smallpox vaccination 409
Conner, Julius S.,M.D., M.P.H., Paul M. Pietzsch and Kent M. Forbes, Measles (rubeola) elimination in Polk County 592
Contraceptive polyp: a diagnostic dilemma, William R. Anderson, M.D., and Allan J. Levine, M.D. 585
Cornell, Steven H., M.D., Angiographic demonstration of bleeding site in acute gastrointestinal hemorrhage 364
Coronary care, Course in intensive 1127
Correlation between fluorescent treponemal antibody absorption (FTA-ABS) results and physicians' diagnoses, Shirley S. Lindell, M.S., and Franklin P. Koontz, Ph.D. 1234
Courmarin anticoagulants, K. L. Walgren, M.D., University Hospitals Drug Letter 298
County Society Officers 788
Course in intensive coronary care 1127
Crowley, Daniel F., M.D., Tell it like it is (Editorial) .. 864
Crowley, Daniel F., M.D., The low road (Editorial) 1055
Current and proposed IRMP projects 1250
Current immunization program, Sidney S. Kripke, M.D., University Hospitals Drug Letter 1070

Dangerous 'Health Club' reducing programs 383
Deaths 98, 188, 330, 438, 550, 646, 806, 901, 994, 1102, 1202, 1279
Deaths from asthma (Editorial) 610
DeKraay, W. H., M.D., H. L. Wormhoudt, M.D., K. E. Lister, M.D., and G. C. Blome, M.D., Evaluation of gastric resections for duodenal ulcer 268
Dermatomyositis, Methotrexate therapy in advanced (Editorial) 1246
Desegregation (Editorial) 693
Desiderata (Editorial) 864
Determining eligibility of beneficiaries and paying Title XIX claims, In the Public Interest facing p. 702
Diabetes mellitus in childhood (Editorial) 154
Diagnosis and management of pediatric jaw fractures, M. L. Hale, D.D.S. 1227
Diagnosis and treatment of occlusive vascular disease: radiologic aspects, L. L. Maher, M.D. 1029
Diagnosis and treatment of occlusive vascular disease: surgical aspects, William H. Myerly, M.D. 1034

Dilantin, W. E. Bell, M.D., University Hospitals Drug Letter 403
Diverticulitis, Surgery for perforated (Editorial) 1245
Doctor's Business 67, 167, 301, 405, 523, 622, 873, 977, 1082, 1180, 1255
Doman-Delacato method (Editorial) 507
Downing, Arthur H., M.D., Physician and traffic safety (Editorial) 865
Dreams of sugarplums (Editorial) 1058
Drug addicts, A new trick tried by 608
Drug Letter, University Hospitals 63, 298, 403, 511, 704, 875, 1067, 1070, 1174
(Drug treatment, leukopenia, exfoliative dermatitis) U. of I. College of Medicine, Clinical Pathologic Conference No. 498 1153
Drugs in pregnancy, Clifford P. Goplerud, M.D., and G. H. Miller, M.D., University Hospitals Drug Letter .. 704
Drug therapy in the management of gastrointestinal complaints, Ronald F. Maly, M.D. 1231
Dunn, Leo J., M.D., Gastrointestinal hemorrhage secondary to stress ulcers 483

Eating-athletic performance concept, Experiments discredit "empty stomach" 691
Effective protection for pedestrians and cyclists 79
Election results, Analysis of, David Broder 1219
Elegy, Henrietta Potts 1057
Emergency treatment of acute pulmonary edema, Philip Samet, M.D., ... 975
Emphysema patients, Rehabilitation center for 677
Environmental factors in incidence of cardiovascular disease (Editorial) 399
Evaluation of gastric resections for duodenal ulcer, W. H. DeKraay, M.D., G. C. Blome, M.D., K. E. Lister, M.D., and H. L. Wormhoudt, M.D. 268
"Evaluation of impairment" series, New pamphlet in ... 116
Expectorants, H. B. Richerson, M.D., University Hospitals Drug Letter 875
Experience with live-virus mumps vaccine (Editorial) .. 955
Experiments discredit "empty stomach" eating-athletic performance concept 691

Fast-acting alcohol antagonist 1077
Federal money for state medical library 307
Fifty-Year Club Members 786
Fish story (Editorial) 609
Flocks, R. H., M.D., and Shu-Feng Cheng, M.D., Combination therapy for prostatic carcinoma, with special emphasis on role of chemotherapy 125
Flu vaccine, peanut-oil base will add effectivenes to, but not this year 1165
Forbes, Kent M., Paul M. Pietzsch, and Julius S. Conner, M.D., M.P.H., Measles (rubeola) elimination in Polk County 592
Foreign travel 1967-1968, Issue of booklet on immunization for 79
Fractures, Diagnosis and management of pediatric jaw, M. L. Hale, D.D.S. 1227
Fresh and canned vegetables have equal nutritive value 188
Funds for fight against alcoholism (Editorial) 1060
Further recommendations for automobile safety design . 934

Garred, J. L., M.D., Look for an increase of organophosphate poisonings in Iowa 841
Gastrointestinal complaints, Drug therapy in the management of, Ronald F. Maly, M.D 1231
Gastrointestinal hemorrhage secondary to stress ulcers, Leo J. Dunn, M.D. 483
General practitioner's approach to phobia and childhood phobia, Hassan A. Al Salih, M.D. 39
Generation gap (Editorial) 509
Geriatric practice (Editorial) 285
Gius, J. A., M.D., T. H. Koch, R. T. Soper, M.D., and R. D. Liechty, M.D., Hyperinsulinism: a report of 12 cases at the University of Iowa Hospitals 579
Glomset, D. A., M.D., New drugs (Editorial) 1056
Goplerud, Clifford P., M.D., and G. H. Miller, M.D., Drugs in pregnancy, University Hospitals Drug Letter 704

Hale, M. L., D.D.S., Diagnosis and management of pediatric jaw fractures 1227
Hanson, James W., and Hans Zellweger, M.D., Muscular dystrophies in Iowa 251
Hawkeye science fair, In the Public Interest ... facing p. 522
Hazards of amniocentesis, Raymond G. Burnett, M.D., and William R. Anderson, M.D., F.A.C.O.G. 130
(Headache, confusion, abnormal spinal fluids) U. of I. College of Medicine, Clinical Pathologic Conference No. 491 138
Headaches which merit neurologic investigation, Maurice W. VanAllen, M.D. 480
Health legislation, 1969 Program of, In the Public Interest facing p. 1074
Hearing aids and hearing-aid dealers (Editorial) 693
Heart failure, mechanism of 66
(Hematemesis, diarrhea, colitis, cryptitis) U. of I. College of Medicine, Clinical Pathologic Conference No. 501 1042

Hirschsprung's disease: current status, Frank E. Miller, M.D., and Robert T. Soper, M.D. 370
How's about preparing that report for us? (Editorial) .. 55
How to live longer or drive to live (Editorial) 291
Human complement: a concise survey of recent advances and possible clinical applications, Andrew B. Weiss, M.D. 838
Human cytogenetics, Part I, Hans Zellweger, M.D. 359
Human cytogenetics, Part II, Hans Zellweger, M.D. 471
Hyperinsulinism: a report of 12 cases at the University of Iowa Hospitals, R. T. Soper, M.D., T. H. Koch, J. A. Gius, M.D., and R. D. Liechty, M.D. 579
Hypospadias (Editorial) 695

Immunoglobulins and disease, Hal B. Richerson, M.D. .. 935
Immutables (Editorial) 1061
In a lighter vein (Editorial) 291
In the Public Interest facing p. 54, 162, 302, 406, 522, 622, 702, 874, 954, 1074, 1166, 1264
Index to the minutes of the 1968 IMS House of Delegates 792
Indian patients, Requests to physicians with 953
Indications for cardiac pacing in acute myocardial infarction, Philip Samet, M.D. 1076
Individualized and thorough medical care for Iowans, In the Public Interest facing p. 622
Indomethacin, M. P. Strottman, M.D., University Hospitals Drug Letter 64
(Infant convulsions, hypoglycemia) U. of I. Clinical Pathologic Conference No. 489 43
Influence of government, C. Joseph Stetler 465
Influenza, Statement on 1152
Information from Iowa Heart Association 975, 1076, 1178. 1251
Ingram, Alvin J., M.D., Relationship between organized medicine and Blue Shield 823
Insurance profile of older driver 1224
Iowa Association of Medical Assistants 78, 173, 303, 410, 514, 625, 707, 889, 970, 1086, 1188, 1253
Iowa Blue Shield annual meeting, Report of 965
Iowa Chapter of American Academy of General Practice 969
Iowa doctors are asked to help in national study of maternity care 943
Iowa doctors should plan to attend 1968 IMS annual meeting, In the Public Interest facing p. 406
Iowa Heart Association, Information from (Emergency treatment of acute pulmonary edema), 975 (Indications for cardiac pacing in acute myocardial infarction), 1076 (Present status of permanent pacing of the heart), 1178 (Late-apical systolic murmur) 1251
Iowa regional medical program is ready to enter operational phase, W. A. Krehl, M.D., Ph.D. 1026
Iowa rules governing temporary medical licenses 1061
Iowa Thoracic Society grants and fellowships, 1969-1970 1061
IRMP projects, current and proposed 1250

Journal Book Shelf 162, 292, 513, 623, 871, 1075, 1181, 1248

Kelly, Dennis H., Jr., M.D., and Howard V. Turner, M.D., Osteodysplasia with mental deficiency 260
Koch, T. H., R. T. Soper, M.D., J. A. Gius, M.D., and R. D. Liechty, M.D., Hyperinsulinism: a report of 12 cases at University of Iowa Hospitals 579
Koontz, Franklin P., Ph.D., and Shirley S. Lindell, M.S., Correlation between fluorescent treponemal antibody absorption (FTA-ABS) results and physicians' diagnoses 1234
Krachmer, Jay H., Therapeutic and cosmetic indications for flush-fitting scleral contact lenses 944
Krehl, W. A., M.D., Ph.D., Iowa regional medical program is ready to enter operational phase 1026
Kripke, Sidney S., M.D., Current immunization program, University Hospitals Drug Letter 1070

Lascari, Andre D., M.D., Bleeding disorders in children: diagnosis and management 831
Late-apical systolic murmur (Information from Iowa Heart Association) 1251
Lawn mower accident reports requested 702
Let's be even-tempered, but pleasantly so 395
Letter to the laity, In the Public Interest facing p. 54
Letters to the editor 291, 402, 696
Levine, Allan J., M.D., and William R. Anderson, M.D., Contraceptive polyp: a diagnostic dilemma 585
Licenses, Iowa rules governing temporary medical 1061
Liechty, R. D., M.D., J. A. Gius, M.D., T. H. Koch, and R. T. Soper, M.D., Hyperinsulinism: a report of 12 cases at University of Iowa Hospitals 579
Lindell, Shirley S., M.S., and Franklin P. Koontz, Ph.D., Correlation between fluorescent treponemal antibody absorption (FTA-ABS) results and physicians' diagnoses 1234
Lister, K. E., M.D., H. L. Wormhoudt, M.D., G. C. Blome, M.D., and W. H. DeKraay, M.D., Evaluation of gastric resections for duodenal ulcer 268
Look for an increase of organophosphate poisonings in Iowa, J. L. Garred, M.D. 841
Low road, Daniel F. Crowley, M.D. (Editorial) 1055

McCulloch, William F., D.V.M., M.P.H., James H. Steele, D.V.M., M.P.H., and Sergio Rabinovich, M.D., panelists, Franklin H. Top, Sr., M.D., M.P.H., moderator, Zoonoses and you: a panel discussion 21
MacQueen, John C., M.D., Study of Iowa medical physicians, Section 1—Number and distribution of doctors of medicine 1129
Maher, L. L., M.D., Diagnosis and treatment of occlusive vascular disease: radiologic aspects 1029
Malaria (Editorial) 1243
Malpractice-insurance rates raised 1141
Maly, Ronald F., M.D., Drug therapy in the management of gastrointestinal complaints 1231
Mason, E. E., M.D., Ringer's lactate solution, University Hospitals Drug Letter 511
Measles (rubeola) elimination in Polk County, Julius S. Conner, M.D., M.P.H., Paul M. Pietzsch and Kent M. Forbes 592
Mechanism of heart failure 66
Medical absurdities in mass-circulated magazines (Editorial) 160
Medical aspects of project Head Start in Iowa 964
Medical ethics (Recent opinions of the AMA Judicial Council), 700 (Medical ethics and discipline) 1072
Medical History 617
Medical societies investigate and do something about patients' complaints, In the Public Interest facing p. 54
Mediastinoscopy, Harry Siderys, M.D., and John N. Pittman, M.D. 931
Medicine and religion 454
Medicine in Vietnam, James E. Whitmire, M.D. 1025
Mercy Hospital Clinicopathologic Conference (Fatal aplastic anemia following viral hepatitis) 948
Merry Christmas (Editorial) 1241
Methotrexate therapy in advanced dermatomyositis (Editorial) 1246
Miller, Frank E., M.D., and Robert T. Soper, M.D., Hirschsprung's disease: current status 370
Miller, G. H., M.D., and Clifford P. Goplerud, M.D., Drugs in pregnancy, University Hospitals Drug Letter 704
Minutes of 1968 Sessions of House of Delegates 719
Miracles of therapy sixty years ago: a testimonial (Editorial) 1061
Moeller, William S., M.D., Francis J. Whelan, M.D., and F. William Bennett, M.D., Morning glory seed intoxication: a case report 946
Month in Washington 10, 114, 223, 346, 455, 566, 658, 818, 918, 1010, 1118, 1215
Morning glory seed intoxication: a case report, Francis J. Whelan, M.D., F. William Bennett, M.D., and William S. Moeller, M.D. 946
Motivation of college student drug-takers (Editorial) ... 955
Moyers, Dr., appointed head of anesthesia 369
Mumps vaccine, Experience with live-virus (Editorial) . 955
Muscular dystrophies in Iowa, James W. Hanson, and Hans Zellweger, M.D. 251
Muscular dystrophy clinic is established in Omaha 1074
Myerly, William H., M.D., Diagnosis and treatment of occlusive vascular disease: surgical aspects 1034

Need for repeated drills in management of mass casualties (Editorial) 614
New and definitive test for syphilis (Editorial) 1241
New drugs, D. A. Glomset, M.D. (Editorial) 1056
New head of radiology at U. of I. 293
New manual—new program from Iowa Heart Association 409
New residency programs in Omaha 677
New trick tried by drug addicts 608
Non-gynecologic malignancies and pregnancy: review, Norman K. Rindernecht, M.D. 1142
Norris, A. S., M.D., Performance of dialysis patients, Personality factors in 671
Noyes, Russell, Jr., M.D., Toward understanding suicide . 1147
Nurse's credo, (Editorial) 153

Obesity (Editorial) 612
Obstetrics and gynecology department in Iowa City shares in testing preventive for Rh disease 64
(Obstructive jaundice in child) U. of I. College of Medicine, Clinical Pathologic Conference No. 495 490
Officers and Committees, IMS, 1968-1969 789
Old friends revisited (Editorial) 55
(Oliguria, uremia, fever, positive Papanicolaou smear) U. of I. College of Medicine, Clinical Pathologic Conference No. 500 854
Osteodysplasia with mental deficiency, Howard V. Turner, M.D., and Dennis H. Kelly, Jr., M.D. 260
Osteomyelitis (Editorial) 400
Osteoporosis, Pessimism and optimism regarding (Editorial) 1169
Organophosphate poisonings in Iowa, Look for increase of, J. L. Garred, M.D. 841
Overton, R. W., M.D., Pityriasis rosea in pregnancy: a case report 1239

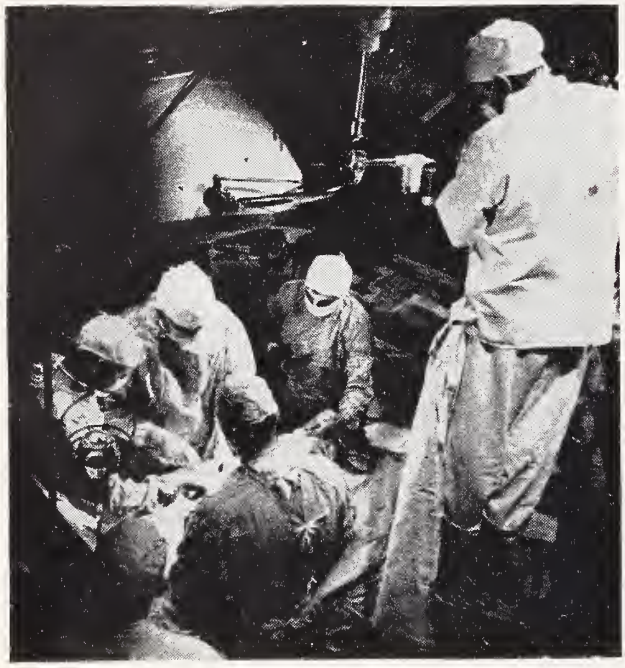
Pathogenesis of pulmonary tuberculosis in elderly (Editorial) 156
Peanut-oil base will add effectiveness to flu vaccine, but not this year 1165
Performance of dialysis patients, Personality factors in, A. S. Norris, M.D. 671
Peripheral vascular disease (Editorial) 287
Permanent pacemaker implanted without a thoracotomy (Editorial) 153
Personals 85, 189, 311, 421, 527, 635, 794, 893, 983, 1095, 1189, 1265
Pessimism and optimism regarding osteoporosis (Editorial) 1169
Phobia and childhood phobia, general practitioner's approach to, Hassan A. Al Salih, M.D. 39
Physician and traffic safety, Arthur H. Downing, M.D. (Editorial) 865
Physician's fees, Percentage of increase in, vs. other goods and services, 1959-1965, In the Public Interest, ... facing p. 54
Physicians' meeting on violence and aggression 1146
Pietzsch, Paul M., Kent M. Forbes, and Julius S. Conner, M.D., M.P.H., Measles (rubeola) elimination in Polk County 592
Pittman, John N., M.D., and Harry Siderys, M.D., Mediastinoscopy 931
Pityriasis rosea in pregnancy: a case report, R. W. Overton, M.D. 1239
Political Creed facing p. 974
Potts, Henrietta, Elegy 1057
Practical politics, lesson no. 1 (Editorial) 503
Pregnancy, Suprapubic aspiration of bladder in (Editorial) 957
Prescriptions, On new Iowa law regarding 902
President's Page 54, 161, 284, 394, 502, 616, 692, 830, 974, 1054, 1166, 1247
Presidential address—American medicine indicted—a defense, Richard F. Birge, M.D. 665
Prevention of tuberculosis 589
Project Head Start in Iowa, Medical aspects of 964
Psoriasis, Antimetabolites in treatment of (Editorial) .. 698
Psychiatry and mental retardation, Two statements published with the approval of Council of American Psychiatric Association 845

Rabinovich, Sergio, M.D., William F. McCulloch, D.V.M., M.P.H., James H. Steele, D.V.M., M.P.H., panelists, and Franklin H. Top, Sr., M.D., M.P.H., moderator, Zoonoses and you: panel discussion 21
Radio device for monitoring tracheostomy tubes 1087
Recent advances in treatment of Dupuytren's disease, Julian M. Bruner, M.D. 245
Regional meetings on medical manpower problem, In the Public Interest facing p. 954
Rehabilitation center for emphysema patients 677
Relationship between organized medicine and Blue Shield, Alvin J. Ingram, M.D. 823
Report of Iowa Blue Shield annual meeting 965
Requests to physicians with Indian patients 953
Required records on stimulant, depressant and hallucinogenic drugs, In the Public Interest facing p. 302
Richerson, Hal B., M.D., Immunoglobulins and disease .. 935
Richerson, Hal B., M.D., Expectorants, University Hospitals Drug Letter 875

Rindernecht, Norman K., Non-gynecologic malignancies and pregnancy: review 1142
Ringer's lactate solution, E. E. Mason, M.D., University Hospitals Drug Letter 511
Risk factors in coronary artery disease, Donald L. Warkentin, M.D. 1137

Sahs, A. L., M.D., and A. L. Benton, Ph.D., Aspects of developmental dyslexia 377
Salih, Hassan A. Al, M.D., General practitioner's approach to phobia and childhood phobia 39
SAMA News, Physicians to get sample copy of 1037
Scleral contact lenses, Therapeutic and cosmetic indications for flush-fitting, Jay H. Krachmer, M.D. 944
Second-grade semantics (Editorial) 286
Should you deed your body to medical science? 874
Siderys, Harry, M.D., and John N. Pittman, M.D., Mediastinoscopy 931
Simplified diet manual study guide 66
"Slow Virus" phenomenon 1063
Smeltzer, Charles C., M.D., Medical ethics and discipline 1072
Smoking and health (Editorial) 614
Social security disability program, Homer E. Wichern, M.D. 675
Sodium-restricted diets, Leaflet on 117
Soper, Robert T., M.D., and Frank E. Miller, M.D., Hirschsprung's disease: current status 370
Soper, R. T., M.D., T. H. Koch, J. A. Gius, M.D., and R. D. Liechty, M.D., Hyperinsulinism: report of 12 cases at University of Iowa Hospitals 579
Staff of Aesculapius 152
Staff of Hermes 152
State Department of Health 72, 179, 304, 407, 515, 626, 713, 878, 978, 1078, 1183, 1256
Statement on influenza 1152
Steele, James H., D.V.M., M.P.H., Sergio Rabinovich, M.D., and William F. McCulloch, D.V.M., M.P.H., panelists, Franklin H. Top, Sr., M.D., M.P.H., moderator, Zoonoses and you: panel discussion 21

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Stetler, C. Joseph, Influence of government 465
Strottman, M. P., M.D., Indomethacin, University Hospitals Drug Letter 64
Study of Iowa medical physicians, Section 1—Number and distribution of doctors of medicine, John C. MacQueen, M.D. 1129
Suicide, our tenth principal cause of death (Editorial) .. 59
Suicide, Toward understanding, Russell Noyes, Jr., M.D. 1147
Summer camp for diabetic children 306
Suprapubic aspiration of bladder in pregnancy (Editorial) 957
Surgery for perforated diverticulitis (Editorial) 1245
Surgery in coronary artery disease (Editorial) 504
Surgical treatment of abdominal aortic aneurysm (Editorial) 959
Syphilis, New and definitive test for (Editorial) 1241

Taking the joy out of life (Editorial) 1059
Tell it like it is, Daniel F. Crowley, M.D. (Editorial) ... 864
Tell it like it really is, Tom D. Throckmorton, M.D. ... 961
Thanksgiving throughout the year (Editorial) 1167
Therapeutic and cosmetic indications for flush-fitting scleral contact lenses, Jay H. Krachmer, M.D. 944
Throckmorton, Tom D., M.D., Tell it like it really is 961
Throckmorton, Tom D., M.D.: You've got to know territory, In the Public Interest facing p. 162
Top, Franklin H., Sr., M.D., M.P.H., moderator, and William F. McCulloch, D.V.M., M.P.H., James H. Steele, D.V.M., M.P.H., and Sergio Rabinovich, M.D., panelists, Zoonoses and you: a panel discussion 21
Toward understanding suicide, Russell Noyes, Jr., M.D. . 1147
Treatment of functional disorders: comparative study, Emerson K. Wirtz, M.D. 487
Treatment of lymphomas with antineoplastic agents, S. Fred Brunk, M.D. 1038
Tuberculosis, Prevention of 589
Turner, Howard V., M.D., and Dennis H. Kelly, Jr., M.D., Osteodysplasia with mental deficiency 260
Two articles that you shouldn't miss reading (Editorial) 609

U. of I. College of Medicine, Clinical Pathologic Conference No. 489 (Infant convulsions, hypoglycemia), 43; No. 491 (Headache, confusion, abnormal spinal fluids), 138; No. 475 (Cancer of the cervix, radiation and chemotherapy, shock), 274; No. 494 (Alcoholism, ascites, coma), 384; No. 495 (Obstructive jaundice in a child), 490; No. 496 (Abdominal pain, Dicumarol, shock), 597; No. 492 (Chest pain, cholecystectomy, shock, hepatomegaly), 678; No. 500 (Oliguria, uremia, fever, positive Papanicolaou smear), 854; No. 501 (Hematemesis, diarrhea, colitis, cryptitis), 1042; No. 498 (Drug treatment, leukopenia, exfoliative dermatitis) . 1153
U. of I. program in stroke management 994
U. of I. Riding-mower accident study 168
Unit-dose drug-distribution system. H. J. Black, and W. W. Tester, University Hospitals Drug Letter 1174
University issue (Editorial) 395
Urinary infections, Antibacterials in (Editorial) 1167

VanAllen, Maurice W., M.D., Headaches which merit neurologic investigation 480
Vitamins B-3 and C benefit schizophrenics 172
Volunteers needed for U. of I. coronary drug project .. 358

Walgren, K. L., M.D., Coumarin anticoagulants, University Hospitals Drug Letter 298
Ward, Donovan F., M.D., "Why I said 'Yes'" 169
Warkentin, Donald L., M.D., Cholesterol-lowering agents, University Hospitals Drug Letter 1067
Warkentin, Donald L., M.D., Risk factors in coronary artery disease 1137
Water sports safety 629
Weiss, Andrew B., M.D., Human complement: concise survey of recent advances and possible clinical applications 838
Whelan, Francis J., M.D., F. William Bennett, M.D., and William S. Moeller, M.D., Morning glory seed intoxication: case report 946
Whitmire, James E., M.D., Medicine in Vietnam 1025
"Why I said 'Yes'," Donovan F. Ward, M.D. 169
Wichern, Homer E., M.D., Social security disability program 675
Wirtz, Emerson K., M.D., Treatment of functional disorders: comparative study 487
Woman's Auxiliary News 81, 176, 308, 417, 518, 630, 710, 882, 980, 1091, 1185, 1263
Wormhoudt, H. L., M.D., K. E. Lister, M.D., G. C. Blome, M.D., and W. H. DeKraay, M., Evaluation of gastric resections for duodenal ulcer 268

Young and the happily not-so-young (Editorial) 160
You've got to know the territory, In the Public Interest facing p. 162

Zellweger, Hans, M.D., Human cytogenetics, Part I 359
Zellweger, Hans, M.D., Human cytogenetics, Part II 471
Zellweger, Hans, M.D., and James W. Hanson, Muscular dystrophies in Iowa 251
Zoonoses and you: panel discussion, Franklin H. Top, Sr., M.D., moderator, and William F. McCulloch, D.V.M., M.P.H., James H. Steele, D.V.M., M.P.H., and Sergio Rabinovich, M.D., panelists 21

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